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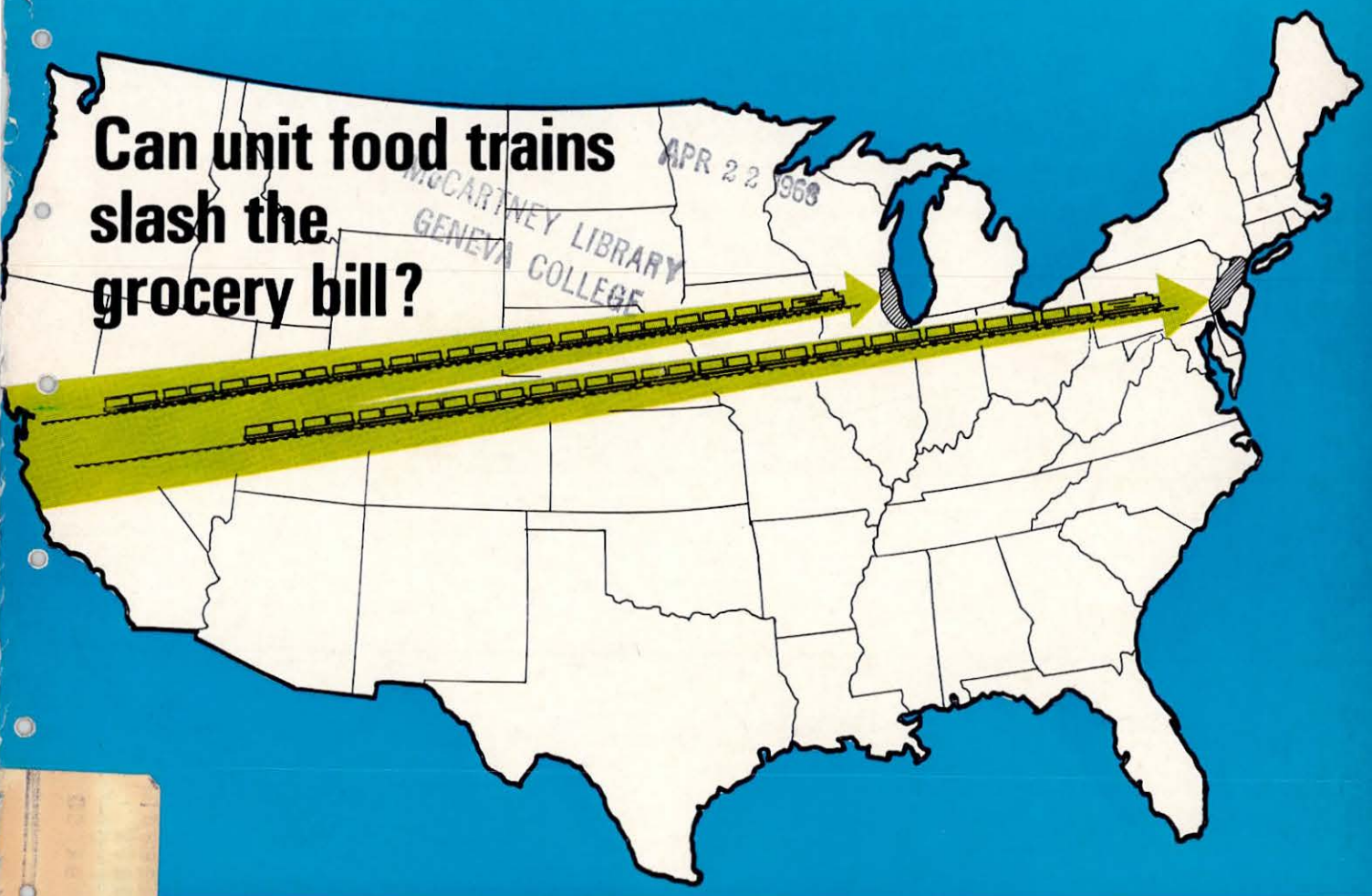
April 22, 1968

RAILWAY AGE

THE TRANSPORTATION WEEKLY



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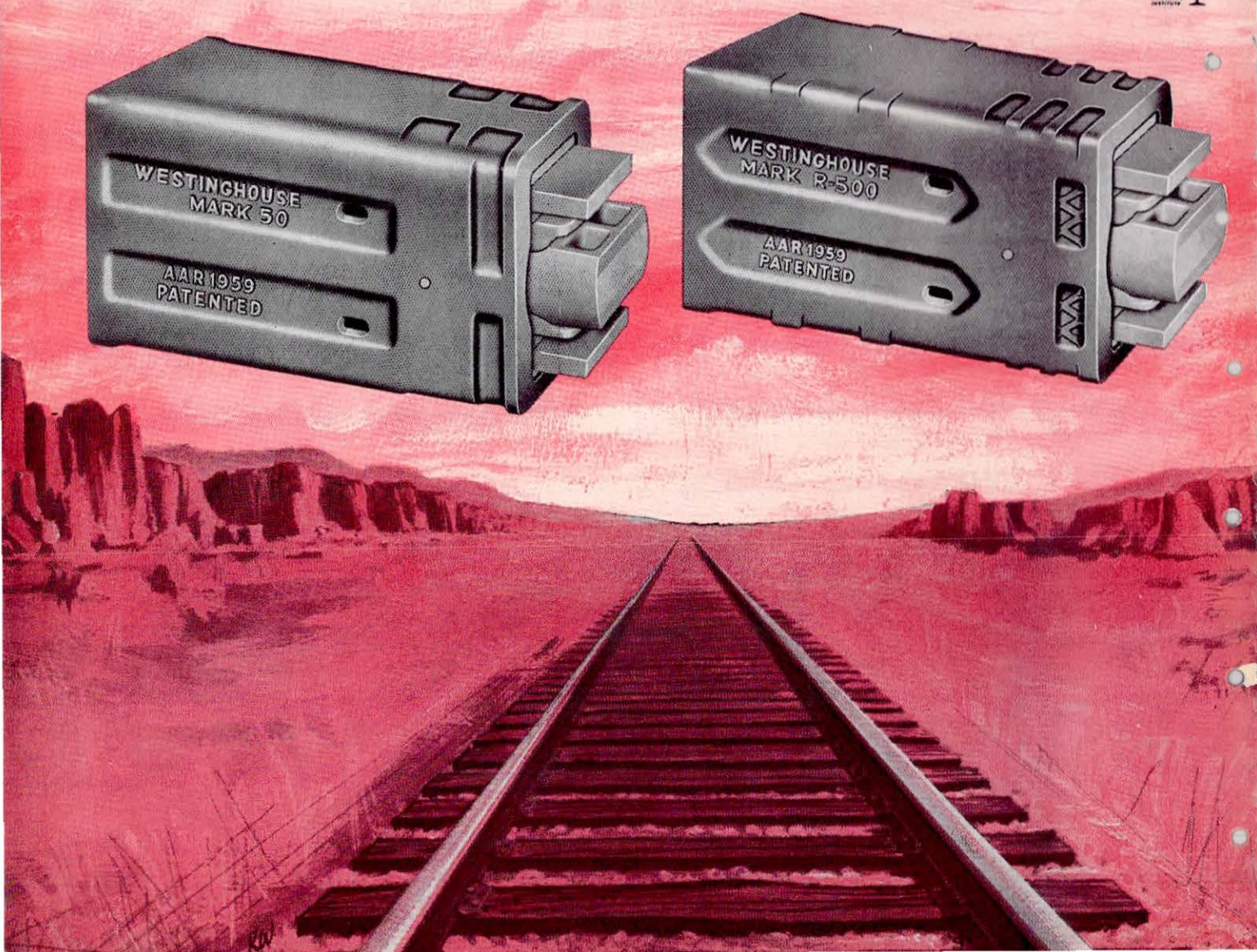
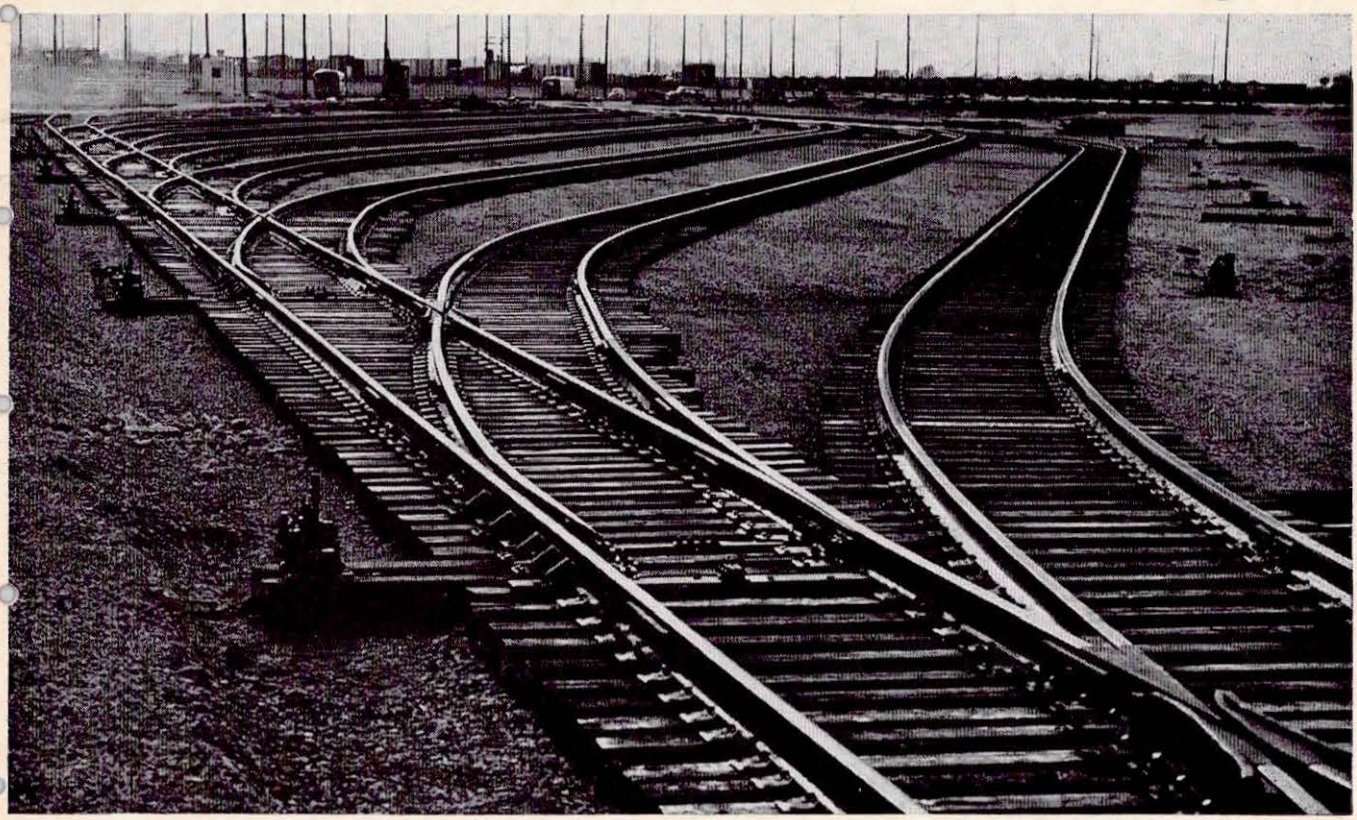


Bethlehem Panelized Switches
simplify turnout installation ...speed up yard construction



At the large new yard shown above, the railroad installed scores of Bethlehem Panelized Switches to simplify and speed up the construction job. Other railroads are picking up the idea—and pocketing substantial savings.

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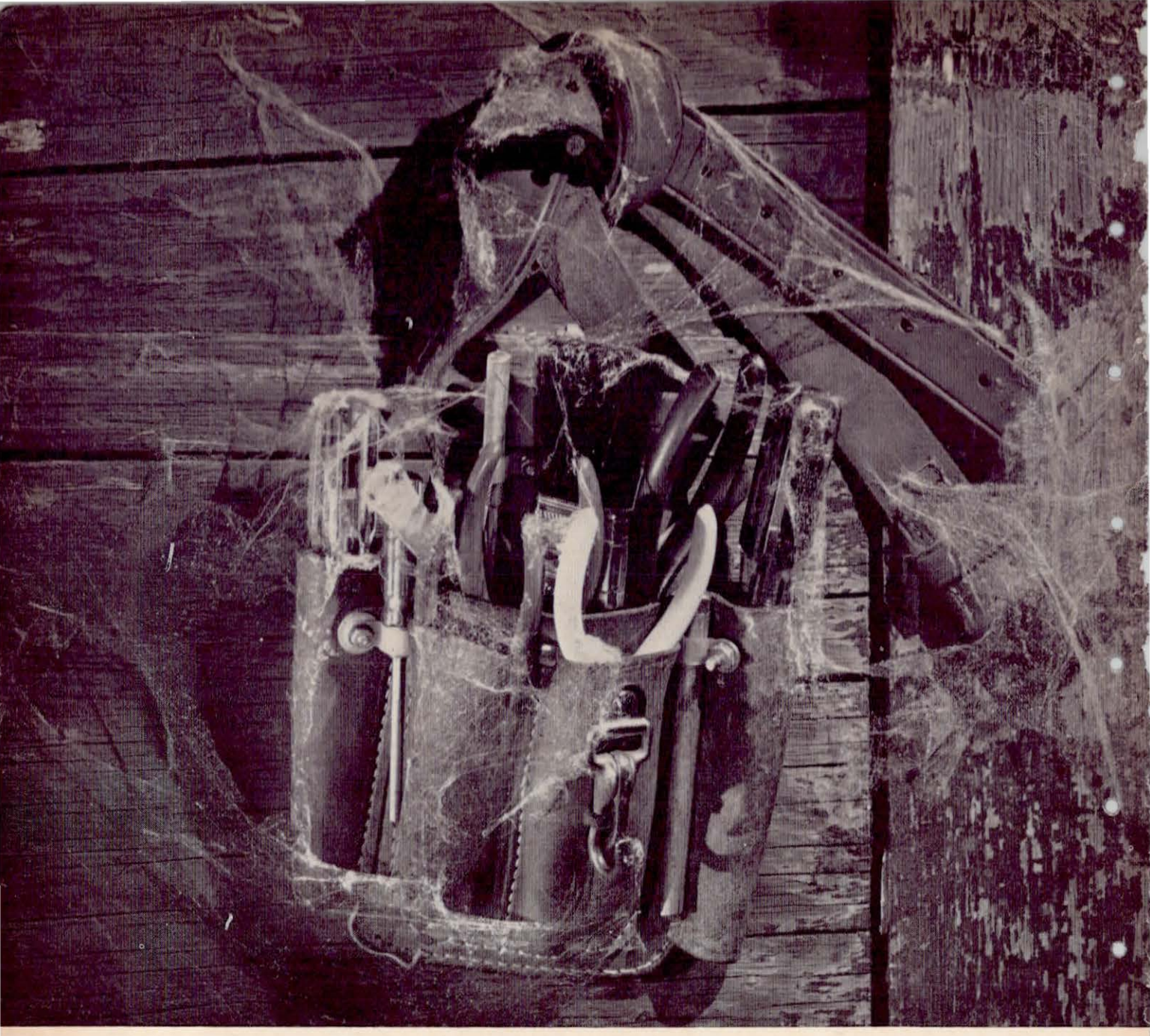

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Circle 3 on coupon page 31

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. . . AND COMING NEXT WEEK

Special Report on Car Supply: Are some railroads losing traffic to other modes because of their failure to supply the right car at the right place at the right time? More than 60 leading shippers have given candid replies to this question in Railway Age's April Traffic Poll; the results will be published April 29. Also: The dilemma carbuilders find themselves in as a result of feast-or-famine purchasing cycles—and its long-range implications for railroads and their customers.

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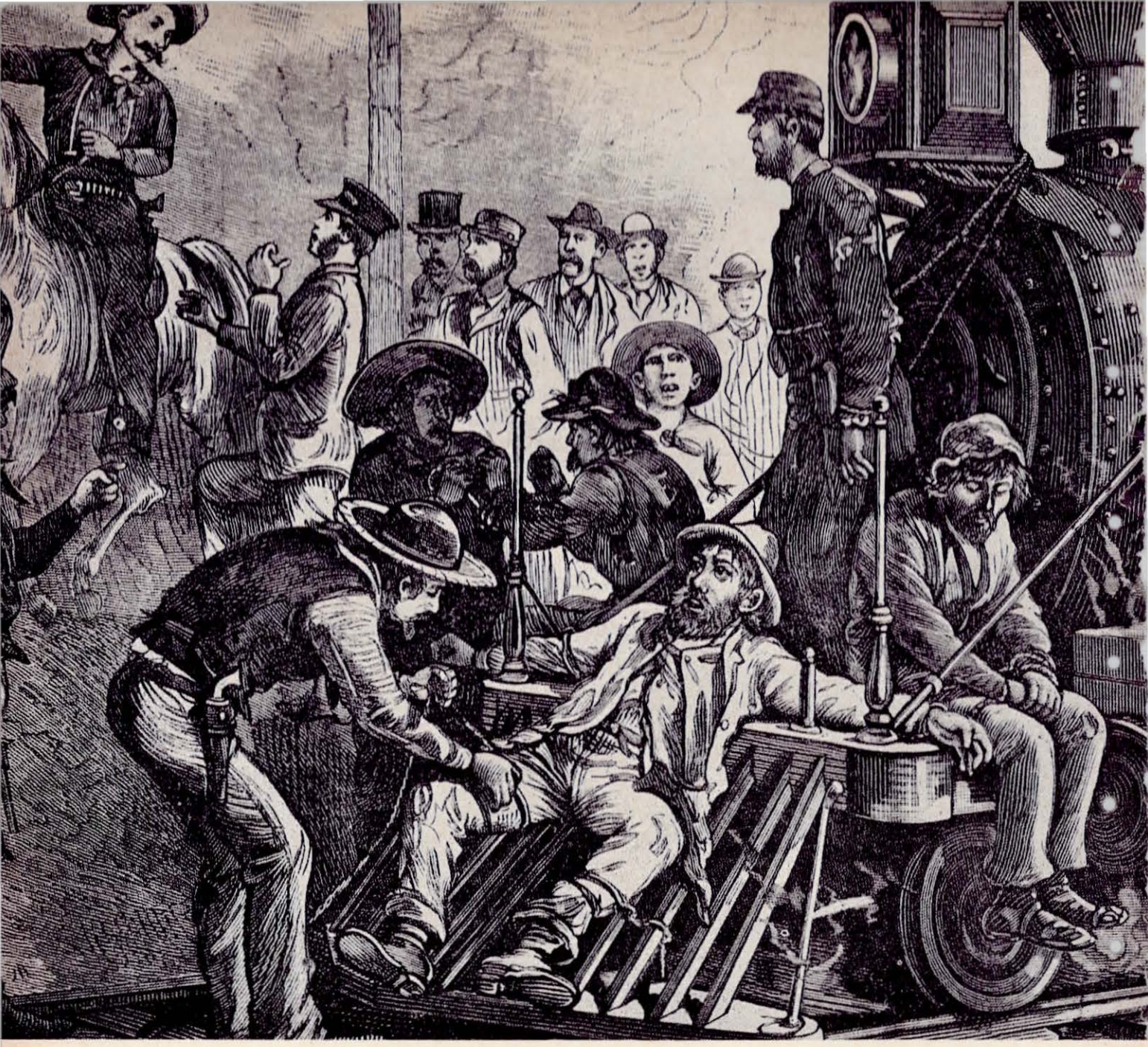

In the 80's, railroads occasionally carried other than revenue freight and conventional passengers, usually by arrangement of a local clean-up committee.
The American West, Lucius Beebe and Charles Clegg

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Afford them, yes. Need them, possibly. Working with your own people, our Railroad Consulting Team can determine whether or not aluminum equipment is practical for your operation. These knowledgeable men are amazingly fast, efficient and objective . . . they examine the alternatives from your point of view.

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SHORT AND SIGNIFICANT

$2-million shop opened by SP at Sacramento A technically-advanced, $2-million freight-car wheel repair facility has been opened by the Southern Pacific at its Sacramento shops. Described by the SP as "one of the most advanced of its kind in the entire railroad industry," the new shop will perform wheel, axle and roller bearing work and employ about 30 men. A new 160-x-160-ft building houses the main operation. Modern materials-handling equipment is used to unload wheel and axle assemblies requiring repair and to reload repaired assemblies. A separate wheel-repair facility, which has been in use at the Sacramento shops, is being expanded to process wheel, axle and roller bearing work for locomotives and passenger cars.

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GUS WELTY

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Test wheat train moves via GN

A solid trainload of Montana wheat rolled out of Wolf Point, Mont., last week (April 16), bound for Portland, Ore., and export to Japan. Great Northern said the experimental train was being operated to determine possible advantages to all concerned—producers, marketers, the railroad and the exporters. The shipment totaled 175,000 bushels, loaded in 50 covered hopper cars.

Joint operation set up by RI, EL

Rock Island and Erie Lackawanna are cutting 24 hours off transit time on freight moving between Marion, Ohio, and the Quad Cities of Illinois, via a new joint operation which eliminates time-consuming interchange at Chicago. Key ingredients in the through service: Pre-blocking, by EL at Marion and by RI at Silvis, Ill.; and the pooling of power (RA, Feb. 19, p. 18).

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MONDAY MORNING REPORT

SAFETY: GOOD NEWS OR BAD?

Safety is one of the primary subjects being talked about by management and labor chief executives in their continuing series of summit conferences. Safety is the subject of a strongly-worded recommendation delivered to Federal Railroad Administrator A. Scheffer Lang by the National Transportation Safety Board.

LABOR, MANAGEMENT QUARREL: NTSB CITES A GRIM RECORD

Like most statistics, safety statistics can be interpreted—to show, for example, that railroads are doing (1) a commendable job, or (2) an abominable job. There is a credibility gap—as, for instance, in the positions taken by management and labor regarding the safety performance of train crews of varying sizes. And now, NTSB has gone on record with the federal railroad administrator with sets of statistical measurements which, at least by inference, make the whole rail-safety picture look bleak.

TRAIN ACCIDENTS: FIXED PLANT SHOWS UP BADLY

NTSB's immediate concern is with train accidents, with emphasis on derailments and with especial emphasis on the growing proportion of accidents caused by defects or improper maintenance in the fixed-property area. The figures cited are indeed grim: For the period 1961-66, train accidents up 63.7%; derailments up 66.5%; derailments laid to fixed-property faults up 140% in absolute numbers and up sharply in relative position as an accident cause.

FOR IMPROVEMENT, NO LACK OF RECOMMENDATIONS

The Board urges Lang to apply "all available resources at your disposal" to reverse the accident trends. It calls for new FRA safety studies. It cites the possibility of increasing inspections "addressed to the worst areas of accident cause and to railroads where a disproportionate number of accidents occur." It puts the primary safety responsibility on rail management and labor, but "if it appears that they cannot or will not accept the challenge promptly. . .consideration should be given to supporting or proposing federal legislation" to give DOT additional regulatory authority.

FOR IMPROVEMENT, ACTION NEEDED—NOT PANIC

Railroad men are aware that they have problems. Efforts are being made to improve the situation, and the recent experience of Chicago & North Western is an encouraging one (RA, March 25, p. 36). Given these efforts, their results, and their continuation, there would seem to be no real and current need for poising the legislative finger above the panic button.

RAILWAY AGE
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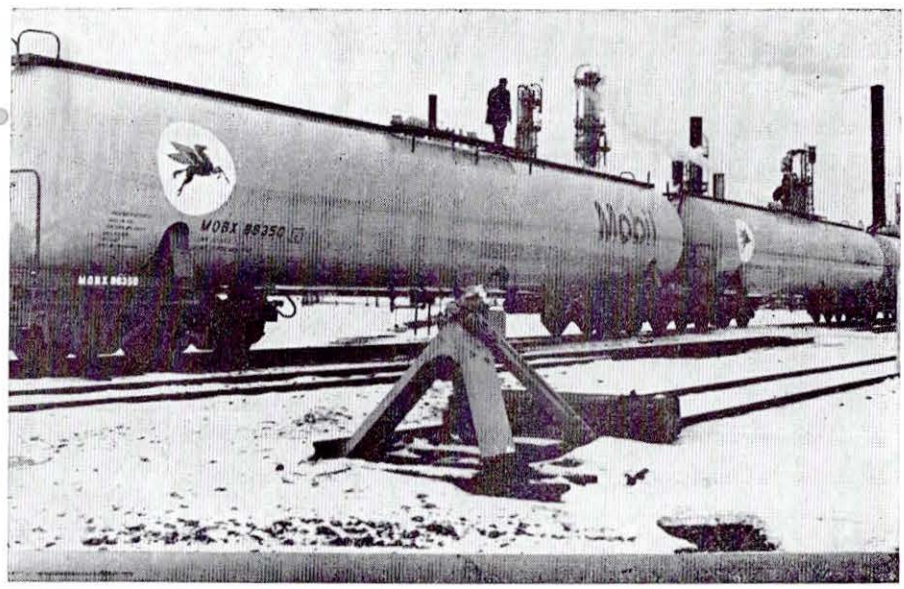
April 22, 1968

WEEK AT A GLANCE

Management-labor discussion: "Lively and useful"

Top-level representatives of rail management and labor have held the second in a series of mutual-interest discussion meetings, on Good Friday in Chicago. They talked of legislative objectives, of safety, and of the industry's competitive position. At the close of the session, chairmen of the two groups—Illinois Central President William B. Johnson and George E. Leighty, president of the Transportation-Communication Employees Union—agreed that the discussion had been "lively and useful. We recognize our obligation to the public to find a firm basis for agreement and to make progress toward goals that are important to the public and to our employees and stockholders." Perhaps underscoring the importance attached to the talks—and the high hopes held for them—was the presence of a new observer at the Chicago meeting: Transportation Secretary Alan S. Boyd.



Mobil gets six-wheel tankers from ACF

Twenty-eight tank cars with 150-ton (six-wheel) trucks—the largest ever built to haul lube oil—last week were hauling Mobil Oil products from a Paulsboro, N.J., refinery to Woodhaven, Mich., and Cleveland—and at reduced freight rates. The 70-ft, 38,000-gallon-capacity ACF cars—nearly four times as large as those they are replacing—are of a stub-sill (no underframe) design that increases payload by reducing deadweight. Each car will make two trips a month and carry an annual volume of approximately 900,000 gallons.

Penn Central has up to $600 million tax loss shelter

The Penn Central plans to use part of its $500 million to $600 million tax loss carry forward in a non-railroad diversification program. The amount of money that will be involved was not revealed. The road's finance committee chairman, David C. Bevan, in a talk last week in Chicago, made the $500 million to $600 million estimate of the tax shelter. Earlier, Penn Central officers had said that some of the tax money would go for diversification.

Part of the tax loss carry forward, described as an "insignificant" portion by Bevan, will expire soon. He said it was the amount resulting from investment credits.

Bevan said the railroad's consolidated first quarter profits were "satisfactory" and better than the corresponding 1967 period. The Pennsylvania, in the first three months of last year, had a net of $2.8 million, while the New York Central showed a deficit of $1.9 million.

Rate delay to cost about $35 million

The 28-day postponement of the Ex Parte 259 rate increases will cost the railroads something like $35 million. This prospective loss is based on the estimated yield from the proposed increases—$460 million a year, or about one and a quarter million dollars a day.

The postponement came after the ICC gave opponents an additional four weeks in which to file their objections. To comply with this new Commission timetable, the railroads set back the effective date of their tariff to June 24, from May 27.

The new Commission timetable fixes these deadlines: May 20, for opposition statements: May 27, for railroad replies; June 3, for briefs; and June 13, for oral argument before the Commission.

7

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But we don't want you to buy it.

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Third, you'll want to reduce your service and maintenance costs. That's included in the lease, too. If the car breaks down, we'll fix it back up.

Fourth, you'll want time to mind your own business. When you lease your cars, you'll have it.

We'll keep the cars running right.

So you'll have time to keep your business running right.

If you follow these simple instructions, you'll end up right back where we started.

First.

But isn't that where you want to be anyway?

TANK CAR DIVISION

GENERAL AMERICAN TRANSPORTATION CORPORATION, CHICAGO

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GUS WELTY

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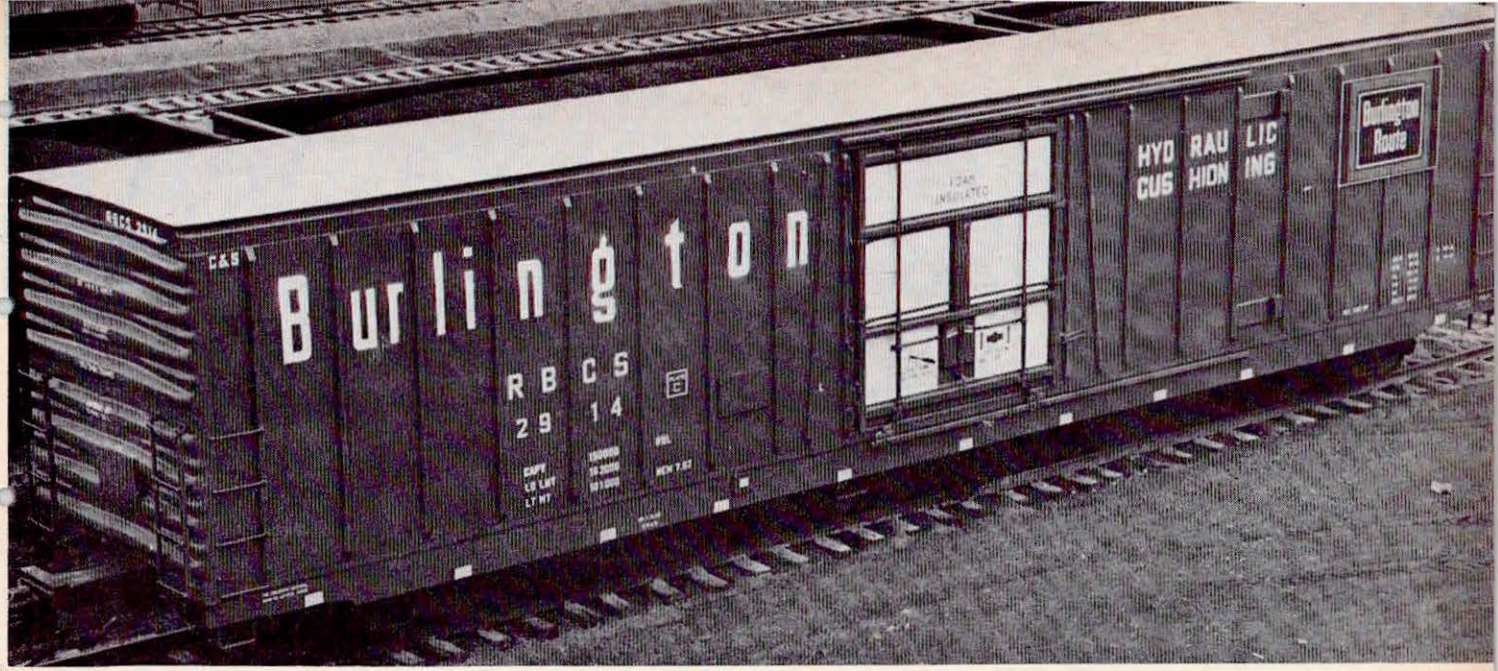
The Senate-approved version is similar in lacking a gross-weight limit, but 105,000 pounds seems to be the limit of what it would permit. The present law has a specific gross-weight limit of 73,280 pounds. The Senate-passed bill also provides for raising the width limit from 96 inches to 102 inches.

Test wheat train moves via GN

A solid trainload of Montana wheat rolled out of Wolf Point, Mont., last week (April 16), bound for Portland, Ore., and export to Japan. Great Northern said the experimental train was being operated to determine possible advantages to all concerned—producers, marketers, the railroad and the exporters. The shipment totaled 175,000 bushels, loaded in 50 covered hopper cars.

Joint operation set up by RI, EL

Rock Island and Erie Lackawanna are cutting 24 hours off transit time on freight moving between Marion, Ohio, and the Quad Cities of Illinois, via a new joint operation which eliminates time-consuming interchange at Chicago. Key ingredients in the through service: Pre-blocking, by EL at Marion and by RI at Silvis, Ill.; and the pooling of power (RA, Feb. 19, p. 18).



NATION'S FIRST plastic-roof-and-door box car was outfitted at Burlington's Havelock shops. The load limit is 162,000 pounds.

Plastic parts cut car costs

CB&Q also thinks plastic doors and roofs, under test on two cars, will do better insulating job.

Plastic doors and plastic roofs are being evaluated on two Burlington insulated box cars. It is a bit early, reports the road, to determine the future of this material in carbuilding. But, says Herschel Hudgens, CB&Q marketing manager for foods and beverages, "if current tests prove successful, Burlington will build more cars with plastic roofs and doors."

● **First in the country.** Burlington President W. J. Quinn has said that these are the first plastic car roofs ever used in America. "It is another example of how railroading is changing as a result of technological progress."

The first car, a 60-foot RB unit, is assigned to moving Green Giant canned foods between LeSeur, Minn., and Atlanta, Ga. The second car, a 50-foot RB, is in general service with Burlington seeking to vary its assignments so that customer reaction may be determined.

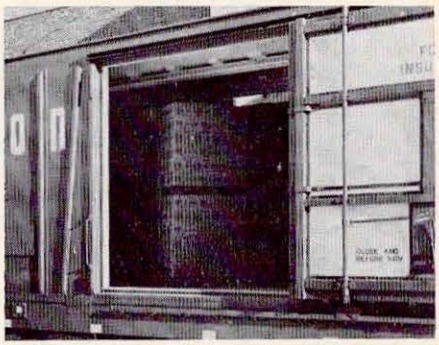
● **Railroad's reaction.** The roof and doors are formed of lightweight polyurethane plastic foam sandwiched in a fiberglass shell. Except for their new roofs and doors, the two cars are similar to 1,750 insulated cars which Burlington has built for the food industry at an average unit cost of $22,000. The 60-foot car with the plastic components weighs about two tons less than its conventional counterparts. Because of the thicker roof on the 50-foot car, the increase in payload is about 600 pounds.

In addition to reducing light weight, according to Hudgens, it is expected that all-plastic roofs and doors will be "stronger, less expensive and have better insulating qualities." He notes that the same type of polyurethane foam used in roof and doors is applied in the floor, ends and sides by means of the foamed-in-place process pioneered by the Burlington.

● **Decade of experience.** Ten years ago Burlington teamed with Sterling Refrigeration & Engineering to begin the use of urethane insulation in transportation equipment. When a four-year test indicated the effectiveness of the so-called super insulation, Burlington proceeded to tool a shop at Havelock, Neb., for in-place foaming of mechanical refrigeration and insulated box cars (RA, March 11, 1963, p. 12).

Tests conducted by Fruit Growers Express at Alexandria, Va., showed Burlington cars to have a heat transmission rate only one-third that of other insulated equipment. The effectiveness of the foamed material enabled CB&Q reefers to have smaller and less costly cooling systems and, simultaneously, larger cargo spaces.

● **And insulated cars.** The road's insulated (RB) cars are virtually identical with its mechanical reefers, lacking only the refrigeration equipment. There is increasing demand for such box cars to carry food products and beverages which must be protected against sharp temperature changes. Such cars are regularly fitted with cushioning, load dividers and side fillers.



STEEL-FRAMED PLASTIC DOOR opens and closes more easily than does a conventional car door.

The 60-foot experimental car has a three-section plastic roof which is secured to sides and ends with lockbolts. Roof sections, 5 inches thick at the peak and 3 inches thick at sides, have tongue-and-groove ends which interlock with each other. Joints are covered by batten strips and sealed with an epoxy compound. Incorporated in the bottom of the roof panels are high-density polyurethane carlines used for supporting the top track of the Evans bulkheads used in the car.

The 50-foot model has 13 roof panels, each approximately 7 inches thick at the peak. This car has Equipco bulkheads and Evans side fillers. Floor stringers in both cars are high density polyurethane. ■

Sylvania presents the car of the future.

Scoffers have attacked the railroads ever since the first "Iron Horse" chugged its way into history.

But without the railroads, America's growth and prosperity would have been long delayed.

They said the railroads would never survive the automobile.

Never compete successfully with trucks.

Never coexist with aircraft.

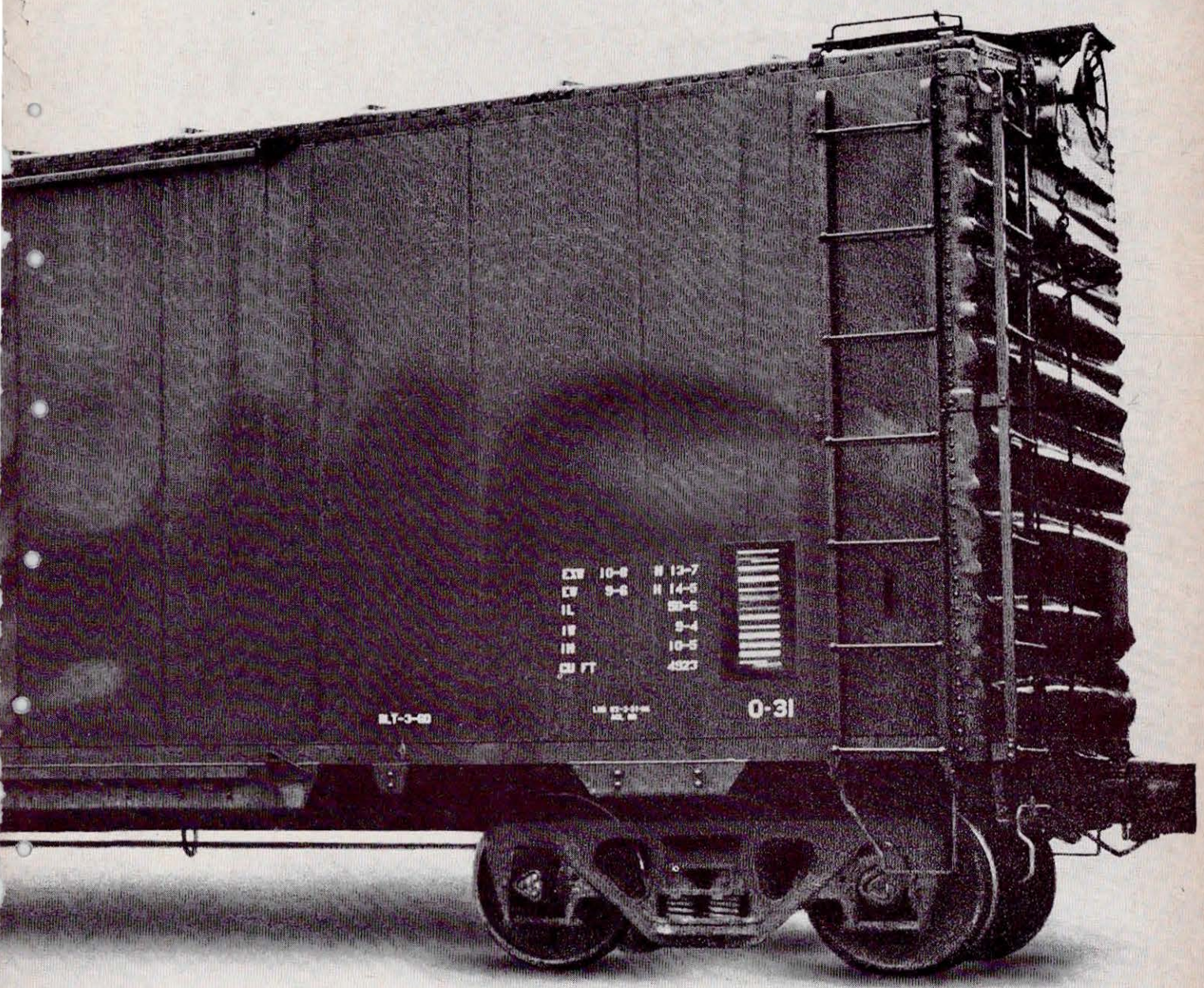
They said the new highways would bury the railroads.

Well, they were wrong then. And they're wrong now. Because they underestimated the railroads' strength and flexibility.

By January 1, 1970, every freight car in the country will be transformed.

Into the car of the future.

*TRADEMARK



They'll do it by installing Sylvania's new KarTrak* Automatic Car Identification System. The most sophisticated traffic control system any industry ever had.

It'll keep track of all your cars—all the time. It'll let you use each car more often, reduce your fleet size, minimize human error, and keep accurate per diem accounting. You'll handle more traffic. Deliver on time. Schedule more efficiently. And assure economical operation.

That's pretty good competing.

So the next time someone says the railroads are a thing of the past, show him your car of the future.

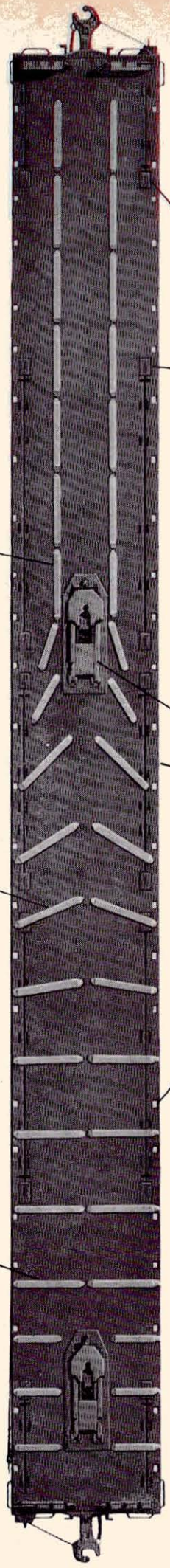
Sylvania Information Systems, Commercial Electronics Division, Bedford, Mass. 01730.

KARTRAK BY SYLVANIA
A SUBSIDIARY OF GENERAL TELEPHONE & ELECTRONICS

VERSA-DECK.™
The multi-service flat car.

Now there's a flat car that can be converted to handle TOFC, COFC, or bulk ladings in less than 15 minutes. And only ACF has it. The new VERSA-DECK flat car.

VERSA-DECK makes every mile pay. Ship in one direction with one payload. Return with another. Time-consuming conversions between uses which once took days now can be done in minutes. ACF designed the 89′ VERSA-DECK with a flexibility greater than that of any other flat car.



It's a container car. Pedestals can be quickly raised for COFC service. And they adjust to accommodate any length container. Stored, they lie flush with the deck to permit trailer loading.

It's a piggyback car. With the adjustable guide rails in the lengthwise position, VERSA-DECK can be used for TOFC service.

Pivot the guide rails in sections to convert VERSA-DECK from one use to another. One man working alone can do the job easily.

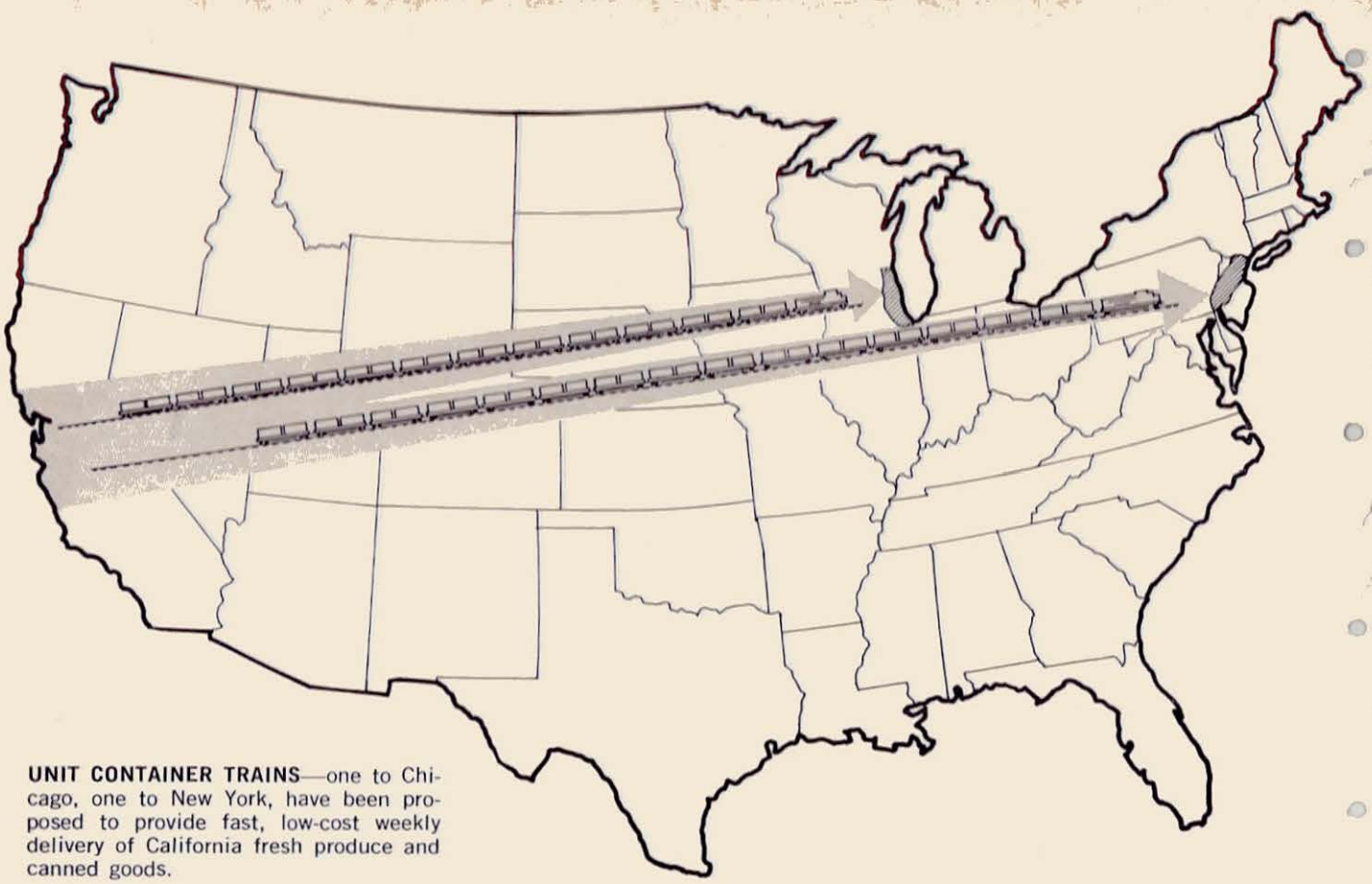
Stake pockets, lading strap anchors, and performance-proven ACF trailer hitches enable any load to be securely fastened on board.

It's a bulk lading car. With the guide rails in the lateral position, VERSA-DECK takes ladings like pipe, tubing, laminated beams, timbers, and dozens of other important revenue sources.

For all the details on VERSA-DECK's long list of standard and optional features, write American Car & Foundry Division, ACF Industries, Incorporated, St. Charles, Missouri 63301.

acf

ACF INDUSTRIES



UNIT CONTAINER TRAINS—one to Chicago, one to New York, have been proposed to provide fast, low-cost weekly delivery of California fresh produce and canned goods.

Can unit food trains slash the

The answer, according to a study made for a food chain store group, is yes. And, in addition to lower prices, the housewife would also get fresher produce via unit container train.

By ED DONLON, Managing Editor

"Ever see a head of lettuce with a hangover? Shop at my supermarket sometime," a New York housewife recently told an apartment neighbor. "And the price! You wouldn't believe it."

The hackles of a supermarket produce manager might start to do a slow rise at such an utterance. But many of the top executives who run the nation's giant food chains would probably agree that customers complaining about the condition and cost of fresh produce are—if not always— at least frequently right.

The head of lettuce in question, for example, took about eight days to move from a California field, through a warehouse, and eventually to the East Coast market produce counter.

Growers and retailers will be quick to admit that new technological advances in refrigeration and transportation have been impressive in recent years.

"People are always going to complain about wilted leaves and small heads of lettuce," adds one Connecticut produce distributor. "They forget how it was just a few years ago."

Still, the giant supermarket chains that feed the populous Midwest and East are continuously checking out new proposals for fast, low-cost ways of getting the goods from West Coast fields and canneries into their customers' shopping carts.

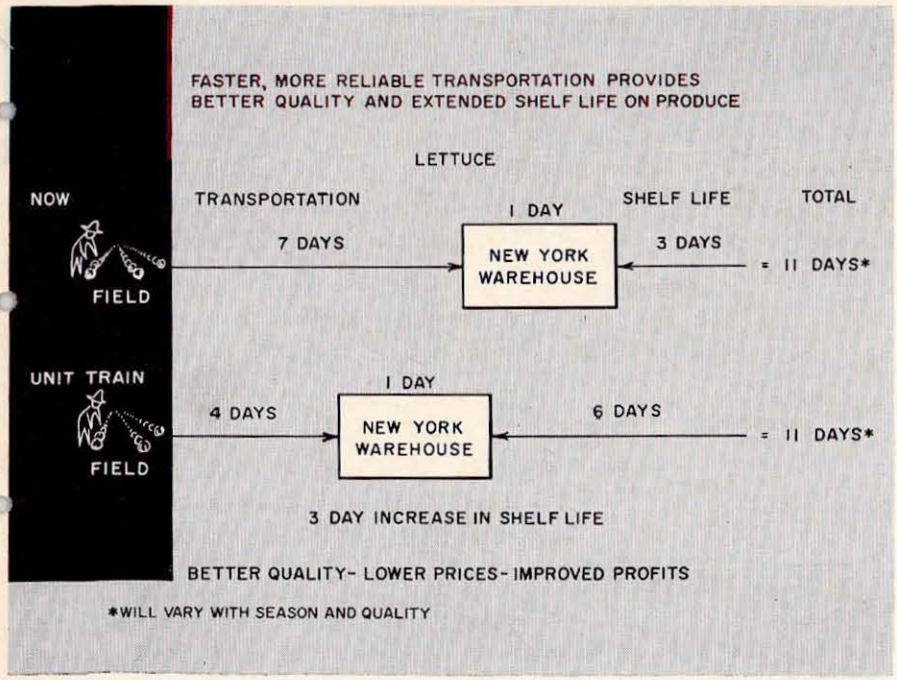
Food industry people complain that the relatively low value per pound of many foodstuffs often jacks transportation costs to more than 30% of total distribution costs, especially when the haul to market is a long one. And, in the case of fresh produce, time in transit reduces the shelf life of an item and often results in a loss to the dealer.

Two years ago, the National Association of Food Chains called in A. T. Kearney & Co., management consultants, to look into the problem of cutting costs in the physical movement of grocery products from source to retail shelf. The aim was to lop off up to 10% of the $11 billion distribution bill. The hunt for a way to save $1 billion a year in distribution costs became known as "The Search For a Thousand Million Dollars."

That search has led to a proposal for a new way of getting California-produced food to the Midwestern and Eastern housewife—a fast, low-cost way, say its backers. And the method they have come up with is the containerized, unit food train.

• **Two trains at first.** The Kearney consultants have just released a report called "Highballing to Market on Unit Trains," sponsored by Del Monte, a sequel to their 1966 study on cost reduction opportunities in the food industry. The food industry is very excited about it. Says Clarence G. Adamy, president of the National Association of Food Chains:

"The report projects a 17% to 18% transportation cost reduction and con-



FAST UNIT TRAIN SERVICE would speed fresh produce to market, extending store shelf life and cutting losses on perishables, such as lettuce.

grocery bill?

firms the feasibility of establishing a unique transportation service that would be of mutual benefit to growers, food processors, food chains, and their ultimate customer—the American housewife."

As its creators see the service, two unit trains (54-55 cars) would be used initially—one running from Northern California to Chicago in 62 hours, the other from Northern California to the East Coast in 77 hours. In time, running times would be improved.

The Chicago train would leave the West Coast every Saturday evening and arrive Tuesday morning. It would leave the Midwest Tuesday evening and arrive in Northern California Friday morning.

The train to New York would leave Northern California every Friday, arrive in New York on Monday evening, and leave for California on Tuesday morning, arriving there on Friday morning.

The trains would be made up of permanently-connected R-89-type flat cars capable of hauling 20-, 24-and 40-foot containers. They would run between three special yards created for the service—in the San Jose-Oakland-Stockton area of California, the Chicago metropolitan area, and a location somewhere in New Jersey between Philadelphia and New York.

The containers would be hauled from the fields or canned food processors on highway trailer chassis to the rail yards, placed aboard the special trains, and sent East. At destination they would be transferred back to highway vehicles for delivery to market.

While the Kearney study indicates there is no direct cost reduction available on produce, by reducing the time in transit unit trains would improve arrival condition and extend shelf life. The service would also permit canned goods buyers to reduce their inventories, and loss and damage would be reduced, say the study's authors.

"Unit trains will initially cut three days off the present seven-day trip from California to the East Coast," predicts Kearney's study director, Wendell M. Stewart. "Further reductions in transit time are available later. In the case of lettuce, the initial trains will mean an increase in shelf life from three days to six. As a result, New York housewives will be able to buy lettuce that is up to 100% fresher and crisper—and produce managers will have a product that remains salable twice as long as at present."

● **Area of study.** The origin area was limited to California and the bordering fruit and vegetable producing regions of Arizona. Because a unit train requires that large tonnages be assembled at a single origin terminal, consideration of a larger area of origin was considered impractical.

The same basic limitation was applied to distribution from destination terminals, consequently only the 20 largest metrpolitan areas in the Midwest and East were included. The areas selected represent 14% of total U.S. food consumption—and a larger percentage of food is distributed through them.

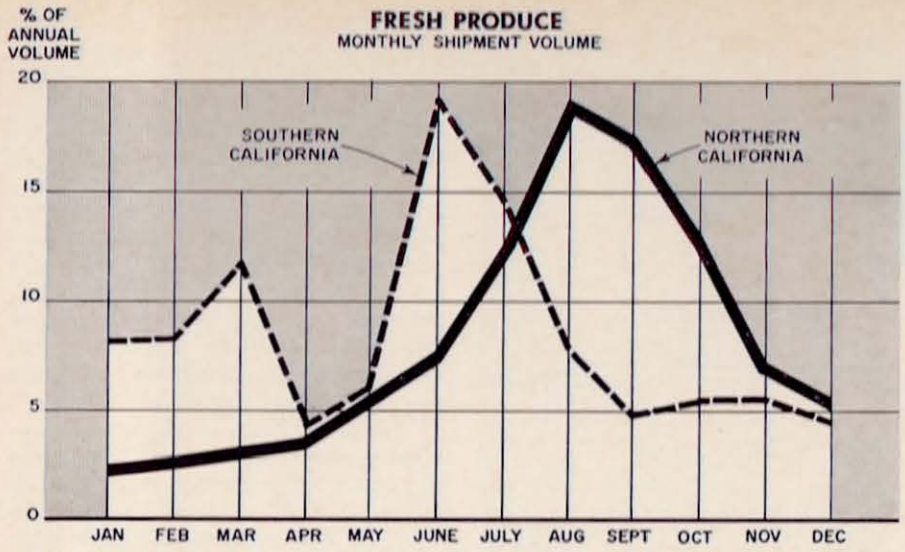
Food products considered for eastbound movement include fresh fruit and vegetables, canned fruits and vegetables, and other food products, including canned fish, dried fruits and nuts. The study was limited to products moving between the suppliers' shipping dock and the food distributors' dock—and not from the distributors' warehouse and the retail store.

● **Method of operation.** Cost of the proposed service would run about $13.7 million for cars, containers, locomotives, land, tracks and other equipment. Who would operate the service? Says Kearney:

"The implementation of these two trains requires that some form of business organization be created to provide the necessary equipment and facilities, solicit freight and manage operations. Our experience leads us to believe that a single transportation intelligence will be required to operate the unit train service because of the need for: (1) Maximum utilization of expensive, specialized yards; (2) Optimum utilization of trains equipment in both directions; and (3) Coordination of backhaul." It's suggested that possibly a shippers' association or a super freight forwarder could undertake the service. However, the report adds that "a great deal of research on very complex legal questions outside the scope of this study will be required before a detailed implementation plan can be developed."

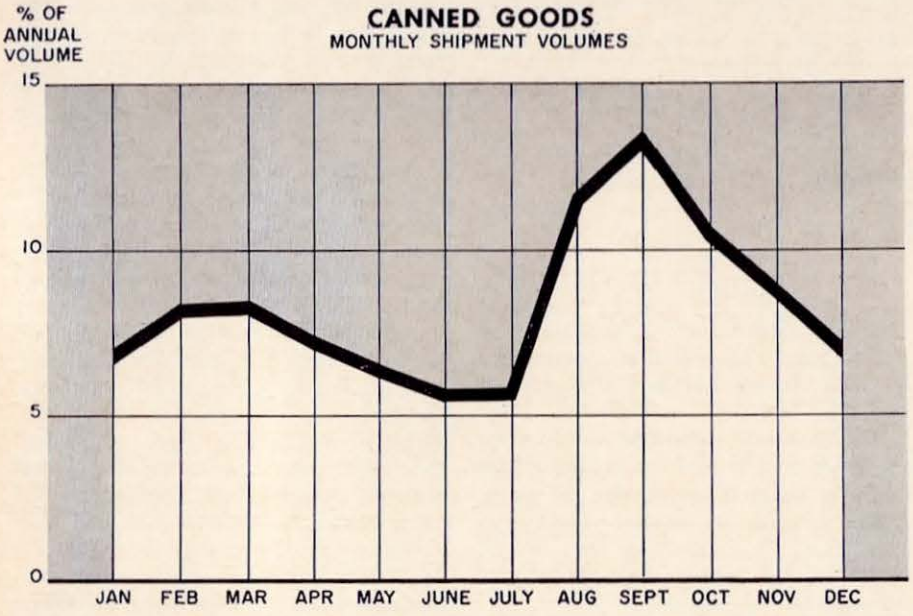
● **Problem of backhaul.** The study estimates that if 75-80% of each train's capacity were utilized on the westbound movement, the backhaul revenue would pay that half of the roundtrip train cost. Freight to fill the empty containers for the moves West would include import freight moving through the Port of New York and manufactured goods.

Freight forwarder traffic would pro-



FRESH PRODUCE shipment volumes from Northern and Southern California have pronounced seasonal variations. This factor makes a train composed only of produce economically impractical, says study.

Food shipments: The seasonal variations



CANNED GOODS shipment volumes range from a low of about 6% to a high of 14%. The variations were taken into consideration in designing operating patterns for the two initial trains proposed by the Kearney study.

vide considerable tonnage for the Chicago train, but not for New York.

"The specific point-to-point tonnage realistically available from each of these categories provides more freight than necessary to operate the two initial trains westbound at 75%-80% of capacity," adds the report.

● **Big potential seen.** California annually ships about 3.9 billon pounds of oranges, lettuce, potatoes, table grapes, lemons, celery, cantaloupes and tomatoes to the 20 major markets in the study area. Its canned goods shipments to the same Midwest and Eastern areas total 1.7 billion pounds annually.

For canned goods alone, the study points out, assuming an average load of 2,000 tons per train, annual traffic would top 100,000 tons.

Of the 1.7 billion pounds of canned goods moving between the California producing areas and the 20 major markets, New York-Philadelphia demand accounts for 33.5% of the total, Chicago-Milwaukee, 14.8%. The third largest market, Detroit, receives only 7.3% of the total, and thus falls considerably short of the volume required to support a unit train, the report points out.

The variations in monthly shipment volume of canned foods (see graph) were taken into account in designing the operating patterns of the two initial trains.

"If the unit trains tend to level these seasonal peaks," the report states, "the economics of the trains will become even more favorable due to improved equipment utilization in what are now low shipment volume months."

As compared with present costs, both unit trains offer a freight reduction of over 17% on canned goods. There is no direct freight cost reduction available on produce, say the study's authors, due to expensive equipment involved, lower load factors, the existing rate structures and the seasonal shipment pattern.

As for canned goods, the rate to Chicago could be cut from the present $1.46 per hundred weight to $1.21. The New York-Philadelphia rate would drop from $1.63 to $1.34. Produce rates would remain at present levels: $1.71 to Chicago, and $2.29 per hundred weight to New York.

The cost projections were based on the use of 40-foot refrigerated containers and 20-foot insulated and dry vans. The study recommended the use of containers instead of trailers because of the advantages of weight, possibility of using lighter weight cars, and reduced wind resistance and lower center of gravity.

"Increases in running speeds," says the report, "could reduce the time in transit from that projected for the initial trains. This would have a further beneficial effect on the quality and shelf life of perishables, thereby attracting to the unit train more of the total food volume moving. In the long term, it may become feasible to consider unit trains which operate on a schedule similar to the Santa Fe's recently announced 40-hour service between the West Coast and Chicago.

"As the percentage of total California canned goods traffic attracted to the trains grows, and if the trains create shifts in produce arrival time requirements, train frequencies could be increased. The addition of non-food traffic to the trains could also result in increased frequencies and, ultimately, in additional origin-destination patterns. Ten years from now we visualize a network of general commodity unit trains crisscrossing the nation like a series of automated conveyors, bringing low cost, reliable transportation to every important sector of the U.S."

A number of railroads think the concept of unit food trains is interesting and is worth exploring. But, predictably, the roads are also concerned about pricing policy and believe it requires careful study. ■

Group will review fast train project

A technical task group to review progress towards high speed train service between New York and Washington and to recommend action for completing the program has been established by the Department of Transportation, Penn Central and three interested suppliers. The latter are the Budd Company, General Electric and Westinghouse.

The decision to establish the group came last week at a Washington meeting where the program's status was reviewed. The review led the government and industry representatives to conclude that "substantial progress has been made in the design and construction of cars to serve this run; and that the work done so far represents the best capabilities available for the project."

DOT's report of the meeting also said, however, that the participants found "original estimates of the time required to get cars ready for the service were too optimistic."

The report went on to say that the task group was set up "because we believe the early establishment of high-speed rail passenger service is essential: because we are determined that this project shall succeed; and because we believe this is the most effective way to deal with the problems which must be solved before service can begin."

The group will operate under the direction of Dr. Larry Goldmuntz of DOT's Office of Research and Technology. It is expected to make its first report by mid-May.

● **Auto-on-train project.** In another railroad project, the word at the Department of Transportation last week was that the Ford Motor Company is still interested in DOT's auto-on-train project but has made no definite commitment.

Auto-on-train is a demonstration project contemplating the transportation of motorists and their cars on specially-built railroad equipment. Washington-Jacksonville was picked for the test route, but DOT did not get the necessary appropriations from Congress.

The auto company reportedly has been making marketing and financial studies of the proposed project.

Ford has been conferring with DOT, the car builders and Seaboard Coast Line, over whose lines the test cars will run. ■

LUTHER MILLER

AS THE EDITOR SEES IT

THAT DOUBLE STANDARD AGAIN—United Airlines President George E. Keck is troubled over the fact that United's rate of return fell to 6.8% in 1967—a five-year low. Nobody seems surprised that Mr. Keck considers this a dangerously low return—and why should they, when airlines have become accustomed to earning 10.5%? Now consider the railroads. With a 2.4% return on investment, they are before the ICC seeking a rate increase. Judging from the reaction in many quarters, you'd think the railroads were pulling a Jesse James. So we have another example of that old double standard: the airlines can do no wrong; railroads can do no right.

ARE AIRLINES REALLY SEXIER?—The easy answer is that airlines have youth and sex appeal; like a beautiful blonde, they can get by with murder. That answer is at best only half-way accurate. Sex appeal, yes. Youth, no. The airplane had its 64th birthday last December.

OR DO THEY JUST THINK THAT WAY?—A recent full-page advertisement signed by United's President Keck suggests that the real answer is that the air industry *thinks* young and sexy—and communicates this to the public. The ad is headed "A New Age of Flight." It leaves the reader with the impression that there is nothing under the sun that is newer or more exciting than the flying machine.

UNITED'S PITCH—The ad talks about the great new jetports, about efforts to resolve problems of airport access and parking, about a great new air traffic control system (which Mr. Keck says unblushingly is being built by "our national government"). "United alone," adds Mr. Keck, "has $93 million worth of improvement projects in the works. . . . We have begun a massive expansion and automation program in our nationwide flight kitchen complex." He concludes joyously: "Tomorrow arrived this morning."

HOW ABOUT RAILROADS?—We wish Mr. Keck all success; what interests (and troubles) us is the fact that there is nothing in that exciting United ad that the railroads couldn't have said about themselves, and better. We are in a new railway age: who knows it? We are building a space-age car-location network that will make United's automated flight kitchen seem like a toy: who knows it? We are investing $1.3 billion to United's $93 million: who knows it? For railroads, tomorrow arrived yesterday: but who knows it? Now why didn't the railroads think of running an ad like that?

America's first new trucks in a quarter century.

The new ALCO three-axle, high speed truck.

Today ALCO is offering all-new locomotive trucks. They're the first dramatically improved trucks from America's locomotive industry in over 25 years.

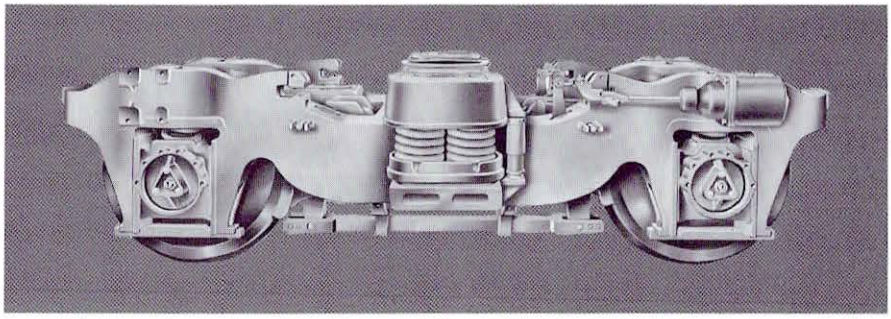
Both our two-axle and three-axle trucks are completely redesigned. Result: significantly lower maintenance and unsurpassed road performance for both models.

Lower maintenance costs.

The philosophy that dominated design of the new trucks was "keep it simple."

And we did. The new two-axle truck is actually built with 21 fewer parts than its predecessors. In the three-axle model, there are 11 fewer wear points. To lengthen time between servicing, we eliminated elliptic springs, spring planks, equalizers, swing hangers and pins. We switched to single shoe brakes, with correspondingly fewer parts to wear and maintain. Also the brake cylinders are high on the truck to avoid damage. And we changed to manganese steel liners. Result: we eliminated many critical wear points and improved life of the others.

We reduced maintenance costs several ways. For example, we left off



truck end transoms to improve access to traction motors for inspection and maintenance.

By keeping it simple, we've greatly reduced man-hours required for complete truck reconditioning. Our preliminary estimate is a 20 to 40% saving.

Improved road performance.

The new trucks perform better under all rail conditions.

In our new two-axle truck, shown above, we've lowered the tractive effort reaction point about 14 inches so it is actually two inches below axle center line. Result: an improvement in tractive effort utilization that effectively adds 10 cars to a 100 car train.

Our switch to double coil spring, rubber sandwich suspension with both vertical and lateral movement damped by separate snubbers gives a quieter cab and smoother rides. In fact, the total effect of lower point of pull and better ride makes our new trucks the finest trucks available today.

Interchangeability.

The wheel-and-axle assembly, including motor and journals are interchangeable with other ALCO trucks.

And our new two-axle trucks are interchangeable with our former models.

You become more competitive.

Our new trucks are designed to help you get ahead of all competition. By themselves, they're a significant reason to take a fresh, close look at an ALCO locomotive proposal. For information write ALCO Products, Inc., Dept. 1010-81, Schenectady, N.Y. 12305. A subsidiary of Worthington Corporation.

ALCO

ACI: How KarTrak works

Automatic car identification system was developed by Sylvania Electric Products. KarTrak has been accepted by the AAR as the standard for the railroad industry. It uses light bounced off color-coded labels to identify cars instantly.

Twenty months from now almost all freight cars on U. S. and Canadian railroads will be sporting black, blue, red and white stripes. But the cars won't look like zebras. The horizontal stripes will take up a space only about 10 inches wide by 22 inches high.

● **Color-coded for identity.** By the combinations of colors, the stripes will identify the car upon which they are mounted. The label, with an adhesive backing, is made of 3M's Scotchlite retro-reflective sheeting. A key feature of this sheeting is that light directed at it is reflected along the same path it took to reach the material.

The label is made up of 13 modules, each consisting of two horizontal stripes. The first module, at the bottom, is called a Start. The next four modules represent the numeric code for type and owner of car. The next six are the car number. The 12th module is the Stop, and the top module is the validity check digit. This last digit comes from a mathematical calculation which determines the correctness of the various modules and insures that the proper label has been installed on the car.

● **KarTrak is AAR standard.** The second key element in the automatic car identification system—developed by Sylvania Electric Products, Inc., and accepted by the AAR as the industry standard—is the wayside scanner. This device changes the optically coded data of the label into an electrical analog signal. The scanner is located at the side of the track. It reads or scans the passing freight car labels from bottom to top.

The KarTrak scanner uses a high-intensity Xenon lamp for generating white light. The light is directed by mirrors to a multi-faced scanning wheel which contains several mirrors. As each mirror of this scanning wheel intercepts the light beam, it causes the light to scan from bottom to top at a high rate. Light reflected from the label follows the same path as the outgoing light, but in the opposite direction. This reflected light passes through a partially silvered mirror and into the acromatic lens. This reflected light beam is focused by the lens onto a slip plate designed so that only light from one part of each label module passes through the slit. Rotation of the multifaced scanning wheel causes the image on the slit plate to be in motion.

The effect of the fixed slit and the motion of the image is to generate a time sequential pulse train of light which is analogous to the label being scanned. This pulse train of light is optically filtered into two relatively broad light spectra indentified as red and blue. Directly behind the filters are two photomultipliers which change the optical signals into electrical analog signals.

● **Decoder interprets.** The decoder is primarily a device for converting electrical signals from the scanner into meaningful numbers for input to a computer, or into direct readout as car initial and number. The decoder analyzes the signals from the scanner and interprets the fact that the scanner has scanned a proper label that meets all requirements for accuracy.

Referring to the decoder diagram, the signals from the scanner are fed into the label data register which can store all data from the scan of one label. As the data from each digit is stored in the label data register, the validity check digit circuitry performs the arithmetic function on a digit-by-digit basis and stores the result.

Simultaneous with this operation, special circuitary is monitoring the first

Flexibility is KarTrak's middle name

Several items of optional equipment are available for the KarTrak automatic car identification system developed by Sylvania.

—Carrier index, which provides for conversion of the four-digit numeric code for type and owner of car to a reporting mark (letters).

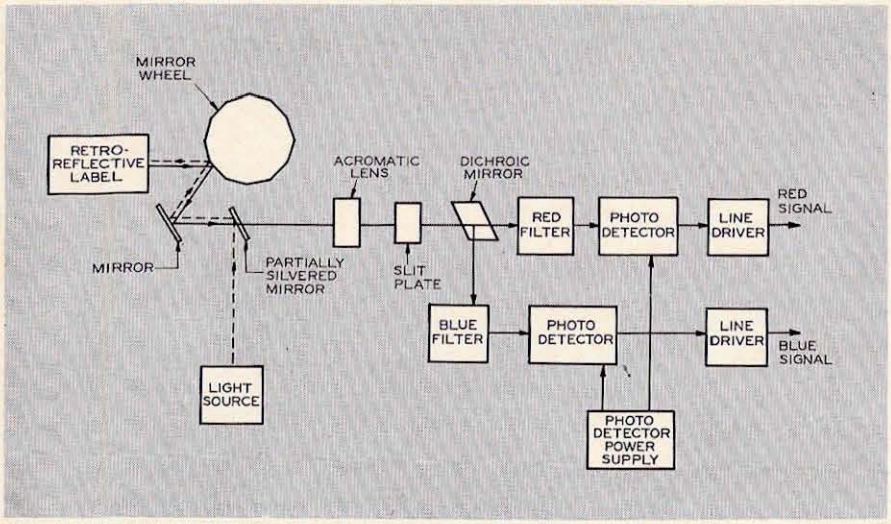
—Buffers, which are used for temporary storage of label data. Trains traveling at 80 mph generate ACI data in excess of 2,400 bits per second. Most data networks of railroads operate at considerably lower speeds, say 75 bits per second. Hence, buffer storage is needed to accommodate high-speed input and relatively low-speed output.

—Message generator, which is used to designate the scanner number or location, train direction, message sequence number, computer directing codes, end of address, format number, start of message, end of message, end of transmission and other fixed information.

—Calendar-clock, which generates information as to the day of year (001-365) and time of day in 2,400-hour format. This calendar-clock must be used with the message generator.

—Piggyback format control, which provides output so that the information is read out, flat car first, followed by any trailers, either one or two carried on the flat car.

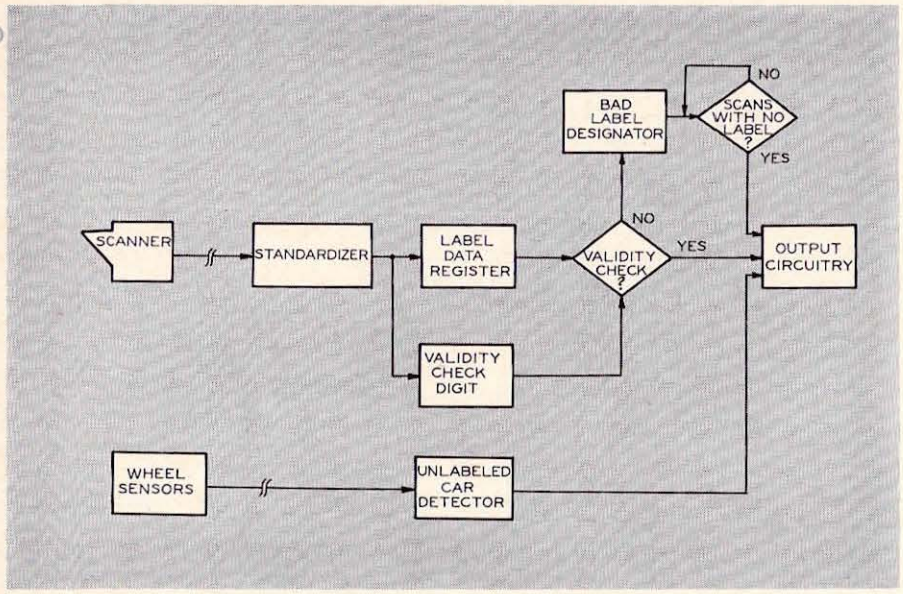
—Additional scanner for dual system. It is possible within the design of the basic system to time share one decoder with two scanners. Using this option permits reading of equipment on two different tracks. However, this option does not permit for simultaneous reading of labels on both tracks. Therefore, simultaneous approach of two trains should be avoided. If a second train arrives before the first train is completely processed, the system will read only the first arrival and ignore the second train entirely.



ACI WAYSIDE SCANNER, located at the side of the track, reads the labels on passing freight cars from bottom to top. Readings are interpreted by the decoder.

Some basic elements in KarTrak system

DECODER, a digital device, analyzes signals from the scanner and decides whether scanner has read a proper label meeting all requirements for accuracy.



position of the label data register for the presence of a Start and of the 12th position for a Stop module. With the use of this monitoring circuitry, the label data register has the capability of indicating the presence of label data which meets the criteria of a Start, 10 digits of information, a stop and a validity check digit in the proper sequence.

When this condition arises, the 13th position of the data label register is compared with the resultant calculation of a check digit by the validity check digit circuitry. A positive check indicates that the information that has been read into the label data register is correct. Accordingly, information from the label data register is dumped into the output circuitry. From here the information is processed into the proper output code for input to a computer, or for input to a teletypewriter or other direct read-out device. Several options are available.

• **Self-checking of data.** If the validity check comparison is negative, the information in the label data register is transferred to the bad label designator and stored there, pending arrival of the label information of a subsequent scan, which is again analyzed by the data label register and another validity check performed. If a positive validity check is obtained, the data is transferred to the output circuitry. If negative, it is transferred to the bad label designator.

This process is repeated until either a valid label is received, or several scans appear without the detection of a stop or start. Failure to detect this for several scans triggers the bad label designator to transfer its information to the output circuitry—with a designation in the 11th position—indicating that this information did not meet the validity check. This designation is in the form of a question mark.

The unlabeled car detector works somewhat independently from the rest of the decoder. It receives signals from wheel sensors on the track. It interprets these signals to indicate the passage of each car. If the indication of a passing car is not cancelled by the indication that a label has been read, the unlabeled car detector would generate a set of zeroes which will then be transferred to the output circuitry as an indication of an unlabeled car.

• **Buy or lease.** The Sylvania Karttrak ACI system can be purchased or it can be leased. Also, maintenance of the system can be obtained from Sylvania. In general, prices for purchase range from a basic system with carrier index (converts all numbers into initials and numbers) for $11,050 to $15,020 for a more sophisticated system including temporary storage of 2,500 labels. Monthly lease prices are $285.95 for the basic system and $388.65 for the more sophisticated one.

Monthly maintenance charges run from $73.66 to $110.50 for the basic system. For the more sophisticated system, charges range from $100.13 to $150.20 per month.

• **Communications interface.** Electrical signal outputs from the KarTrak system can meet most any requirement. Output can be to teletypewriter equipment, to 5-level Baudot code in the AT&T 83B2 system, to 8-level ASCII code in the Teletype 8A1 system, or to a 7-level Sylvania control unit that provides direct linkage to IBM 1050 communications networks. ■

LOCOMOTIVE SIMULATION program on IBM System/360 Model 30 is checked by C. W. Brittell of Alco information services. The program, says Brittell, "models the total situation faced by management and spells out available alternatives."

Computers look for answers

Simulated locomotive runs provide expert guidance on engineering, operations and financing.

An advanced computer simulation program developed by Alco Products, is producing results which assist railroad managements in formulating short- and long-range locomotive selection and application.

A new IBM System/360 Model 30 handles the highly complex calculations which permit ALCO to "run" any simulated train over any simulated route to determine optimum power assignments. This provides detailed analyses of locomotive functions within a given railroad system. ALCO also evaluates alternate financing methods to provide management with fiscal as well as technical guidelines.

• **How it works.** A recent study involved a large Eastern railroad with highly varied trackage. The performance of certain locomotives was simulated in terms of the railroad's particular operating requirements. From the results of this study, ALCO recommended the following management action: buy 20 new Century high horsepower locomotives. The resulting multi-step reassignment pattern, involving an operating fleet of 61 locomotives, eventually would enable the railroad to retire 43 older units which had high operating costs.

The financial aspects of this same study showed that, allowing for tax credits and cash flow generated by the new locomotives' savings in maintenance and operation, the investment in the 20 new units would actually improve the company's cash position after a short period.

"This is a multi-dimensional approach," explains Creighton W. Brittell, ALCO's director of information services. "Engineering, operations, and financing all interlock and our simulation techniques take account of that. It models the total situation faced by management and spells out the available alternatives. Basically, it's an operations research concept."

• **Prelude to action.** Simulation is the mathematical representation of physical or other properties in what is called a model, which is then "tested" under changing conditions. The computer permits testing of a huge range of variables, allowing management to study the potential results of a decision before it is made.

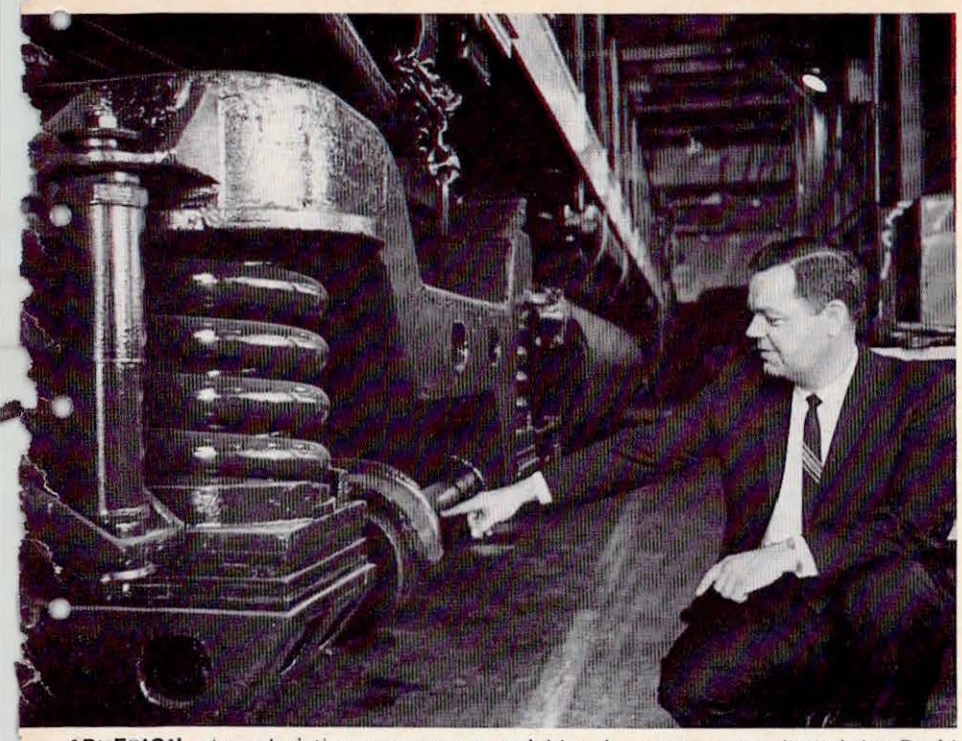
A railroad executive contemplating total or partial replacement of an aging locomotive fleet faces a whole complex of related questions: What type of locomotive will perform most efficiently on his line and under his traffic conditions? How many locomotives will be needed to maintain present and prospective schedules? How can he optimize train tonnage, scheduling, and locomotive assignments to get the most efficient use from the contemplated new power fleet? How will increased efficiency and other pertinent financial factors help amortize the investment in new motive power?

Over forty different railroads have asked for and used ALCO's motive power studies, which include comprehensive system studies involving all phases of operation: high-speed freight, local freight, drag, piggyback, passenger, branch line, and yard service.

• **Where it begins.** The first step in each project is to compile pertinent data. Basically, this falls into four main categories: track data, train data, schedule data, and operating cost data.

Track data define the physical characteristics of the railroad, such as track profile, length and magnitude of grades, safe speed limits for various track sections, and distance between stops.

Train data include locomotive tractive effort (describing the pulling potential, locomotive weight, number of locomotives pulling a given train, train



ADHESION characteristics are among variables in program conducted by David R. Strom (shown inspecting locomotive truck designed to improve adhesion).

to power problems

tonnage, and rolling resistance at various track sections, and distance between stops.

Train data include locomotive tractive effort (describing the pulling potential), locomotive weight, number of locomotives pulling a given train, train tonnage, and rolling resistance at various speeds—a composite of individual car weights, journal, flange, and air resistance.

Schedule data include departure and arrival times, stopping points and durations en route, and traffic flow variances.

Operating cost data usually pertain to maintenance, fuel, and crew costs, along with the basis for determining these factors. Included also are historical data to determine the various trends of each by type of unit and type of service.

The computer program relates the characteristics of various ALCO locomotive power studies, "we work out all traffic conditions. "In effect," says David R. Strom, who programs ALCO's motive power studies, "we work out all feasible combinations of trains and locomotives, taking into account locomotive cycling patterns and variety of assignments."

A railroad may want to determine whether there is any advantage to equipping its locomotives with dynamic brakes. The computer analyzes descending grades and the percentage of running time spent on such grades to indicate the most efficient and economic braking method.

● **Fewer units may be needed.** The desirability and effectiveness of multiple-unit operation can also be studied. It often turns out that a railroad can reduce the number of locomotives by replacing older types with fewer high-horsepower models. In other situations, efficiency might be gained by switching from 4-axle to 6-axle units to gain added traction capacity per locomotive, thus being able to pull heavier trains over ruling grade conditions.

A locomotive is sometimes customized by adding extra weight for better use of tractive power to allow a given engine type to pull heavier tonnage on steep grades. Or, larger fuel tanks may be installed to extend the range between refueling stops.

In addition to the basic elements of horsepower and traction, variables such as gearing and adhesion characteristics are considered. Where the roadbed includes short but relatively steep grades, train length becomes an important consideration because different parts of a long train may be rolling over track segments of different inclination. Part of such a train may be running downhill while another part climbs and the downhill momentum must be factored into the calculation of tractive power.

ALCO's simulation program may well be one of the first sufficiently advanced to take full account of these multiple, interrelated factors, along with such data as turn-around time and relief and protection requirements.

● **Cutting costs.** In the financial phase, the computer program generates data from which is produced a complete cash flow diagram, based on modern accounting practices and readily understandable by management. The basic concept in this financial analysis is to demonstrate the ability of new motive power to generate significant savings, particularly in the important early years of service. Brittell points out a basic similarity between analysis of the operating problems and financial problems which are evaluated in "motive power life cycle costing." First, a motion study of rolling stock is run, then a motion of study of money.

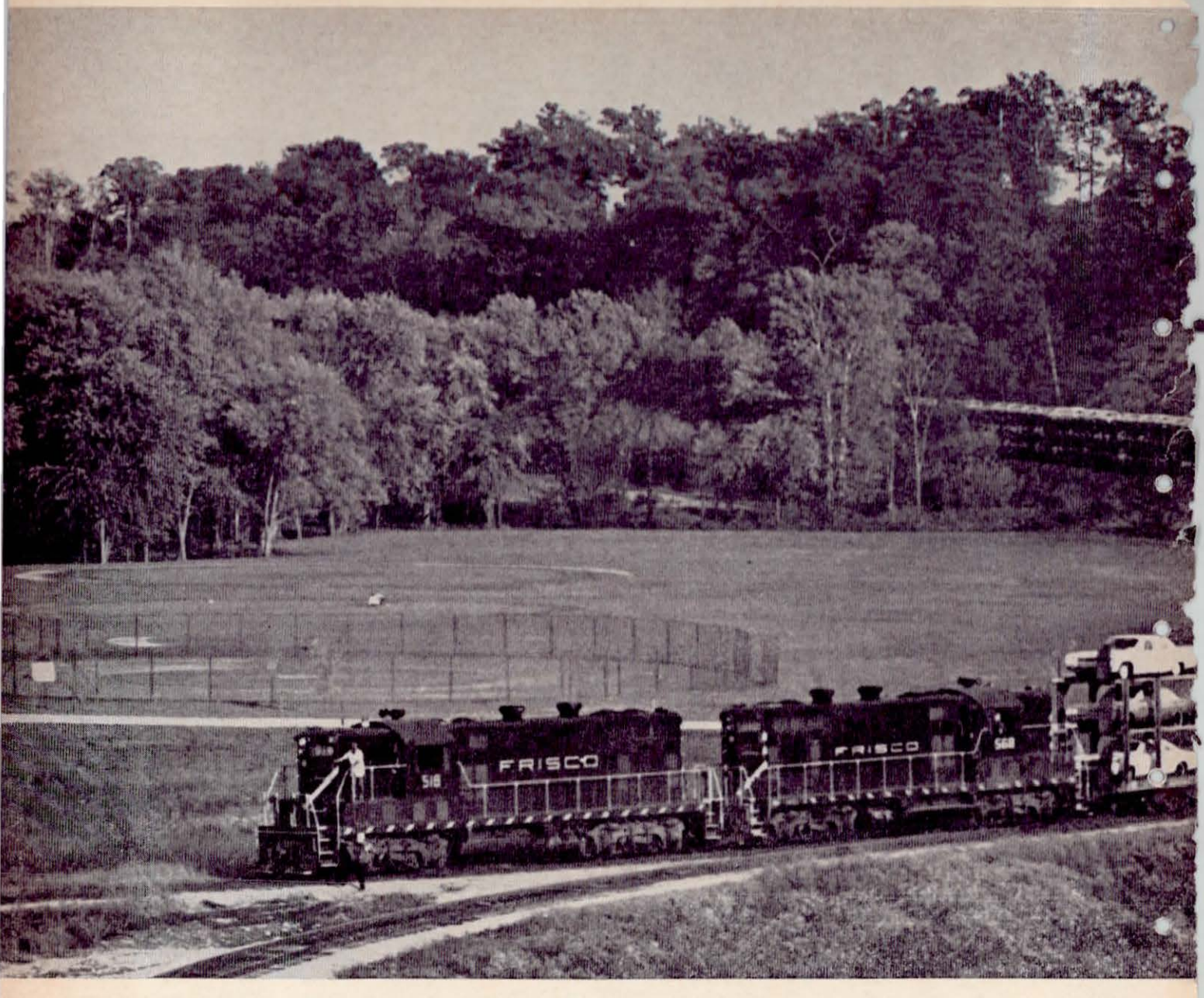
While simulations of this kind are not new in principle, it was only with the advent of high-capacity computers that they became practical. Strom began such computations as far back as 1954 with a desk calculator and a slide rule. Others at ALCO had been doing it before that.

"At that time," he recalls, "it took a full week to simulate a 300-mile run of a single train. Today, the Model 30 does the same job in less than 10 minutes."

● **Comprehensive job.** Because of the long computation time involved, early simulations were usually confined to just one "typical" train. It is now possible to simulate every actual train on every mile of track, plus the hypothetical alternatives in tonnage and power. Moreover, according to Strom, the greater "memory" capacity of System/360 permits program refinements resulting in more realistic simulation of actual operating conditions.

For all the intense effort going into these motive power studies, they are only a small part-time job for ALCO's computer. It handles other such varied assignments as centralized accounting and inventory control for the company's plants and warehouses in various parts of the country, plus engine performance and crankshaft stress analyses for the engineering department. However, the motive power studies represent one of the computer's most imaginative and sophisticated applications.

For ALCO's customers, these simulations have developed a new area of information not available before. They help railroad management base far-reaching decisions more solidly on the technical and financial realities of a given situation. ■



Trainload vs. truckload in the

Here you see one self-propelled vehicle—a train—carrying, say, 1,000 (could be 2,000) other self-propelled vehicles—automobiles out of Detroit.

Makes you think!

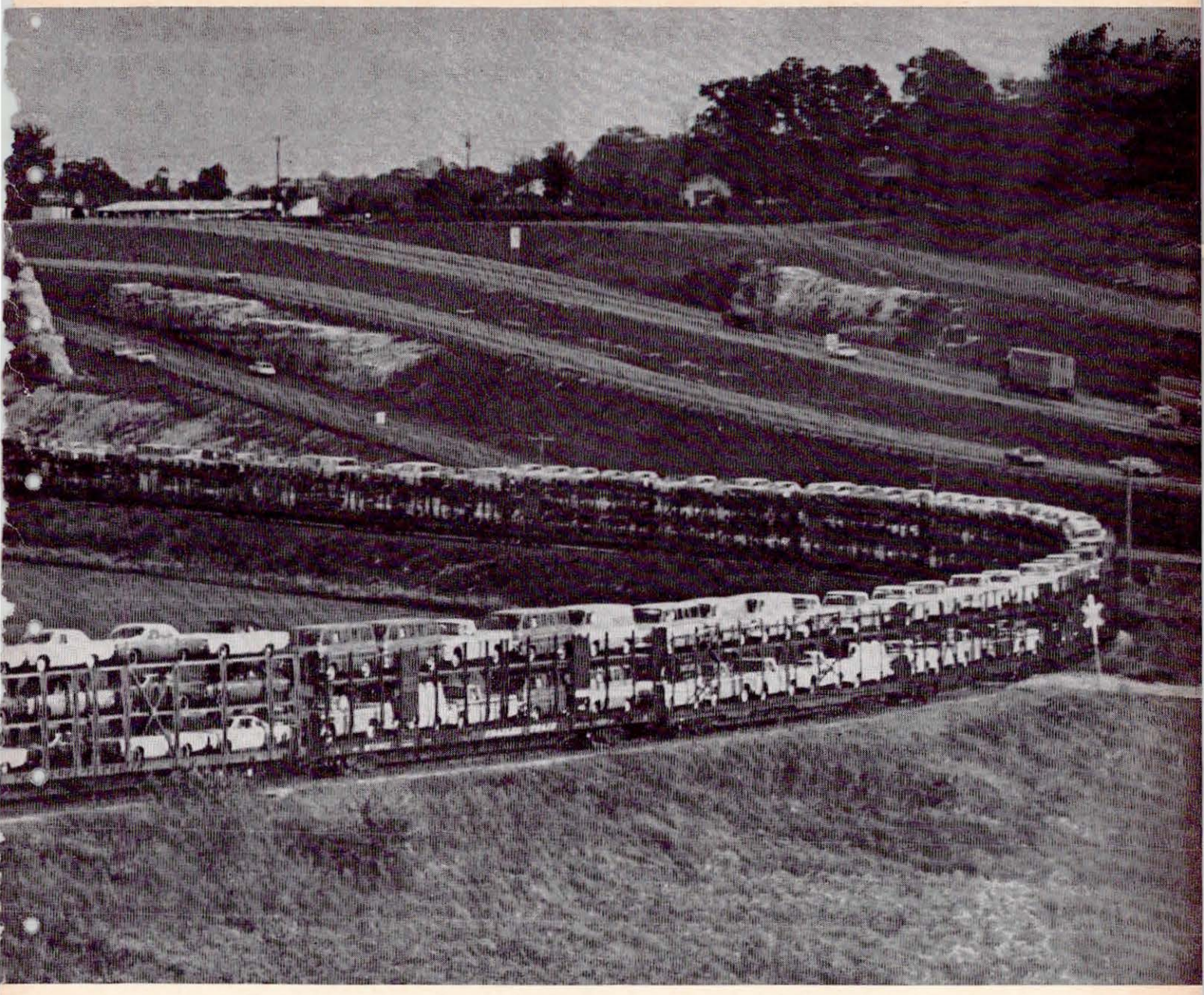
Anyone who looks into America's double-the-population, triple-the-production future and doesn't see a big part of its volume and efficiency riding on the rails is looking through the wrong end of the telescope. For example . . .

Today, some of our best brains are struggling to develop guidance systems for cars and trucks.

Guiding trolleys? Buried electronic guidelines? *Guided movement is built into the railroads with the rails they ride on.*

Other best brains are struggling to un-glut the highways . . .

Car pools? *The train is the biggest car pool ever invented.*



new railway age

Wider highways? *A single track of a double-track railroad can carry the load of an estimated 10 to 20-lane highway, if you can imagine such a monster.*

Safety? Controls to keep a stream of autos and trucks the right distance apart? *The coupled cars of a train can't run into each other.*

Greater efficiency? There are 11 drivers operating the 8 cars and 3 trucks visible on the highway above. *One "driver" is operating the train.*

Greater economy? *For all its fantastically heavier load, the train pictured above is probably operating on only about four times the fuel used by the 3 trucks and 8 cars (which 8 cars would barely fill half of one of the train's auto rack cars!).*

That triple-decker unit train didn't just happen. Today's railroaders eat up new ideas. Where they look to see them first is in weekly RAILWAY AGE. What a place to tell them all about *your* ideas!

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PEOPLE IN THE NEWS

GREAT NORTHERN.—Effective Apr. 1, **B. E. Waugh,** sales manager, Portland, Ore., transferred to Los Angeles, to succeed **T. L. May,** retired. Mr. Waugh's successor is **R. M. Brestel,** sales manager, Tacoma, Wash., who in turn is replaced by **T. H. Green,** transferred from Wenatchee, Wash. **W. F. Hoffman,** sales manager, Minot, N.D., replaces Mr. Green, and in turn is replaced by **J. P. Burns,** traveling sales representative, Sioux Falls, S.D. **T. E. Fahey,** office manager, Chicago, named to the newly created position of export-import agent there.

INTERSTATE COMMERCE COMMISSION.—James T. Glenn, Congressional liaison officer, Office of the Secretary, Department of Transportation, Washington, D.C., appointed to a similar position with the ICC.

JOHNSTOWN & STONY CREEK—LAKE TERMINAL—McKEESPORT CONNECTING—NEWBURGH & SOUTH SHORE—NORTHAMPTON & BATH—UNION—YOUNGSTOWN & NORTHERN.—James P. Keeney, Jr., assistant traffic manager, Pittsburgh, Pa., promoted to traffic manager there, succeeding **Paul C. Magill,** retired after 45 years of service.

MAINE CENTRAL.—Percy H. Coombs promoted to general supervisor, maintenance of way, Portland, Me. **Clarence W. Beckwith,** assistant supervisor, bridges and buildings, named assistant supervisor, maintenance of way.

Rodney E. MacLearn, trainmaster, Portland Terminal, appointed assistant superintendent, MeC and PT, succeeding **Michael F. O'Brien,** retired after 54 years' service. **Reginald J. Thompson,** yard clerk, South Portland, named trainmaster.

PENN CENTRAL.—The following general managers elected vice presidents and general managers: **George M. Smith,** Central Region, Pittsburgh; **John H. Burdakin,** Lake Region, Cleveland; **William B. Salter,** Northern Region, Detroit; and **Howard C. Kohout,** Western Region, Chicago.

John J. Maher named assistant vice president—labor relations, Philadelphia. Mr. Maher formerly was director, labor relations, Pennsylvania. **George F. Daniels** and **Robert E. Swert** appointed directors—labor relations planning. Mr. Daniels formerly was assistant director—labor relations, PRR. Mr. Swert was director of labor relations, NYC. **Norman P. Patterson,** manager, labor relations, PRR, appointed director—labor relations, PC.

Donald A. Swanson, district transportation superintendent, Cleveland, appointed assistant general manager, Western region, Chicago, to succeed **Frank S. King,** transferred to the Eastern region, Philadelphia, to replace **H. P. Morgan** (RA, Mar. 25, p. 68). **William C. Wieters,** superintendent, Pittsburgh division, appointed assistant general manager, Central region, Pittsburgh. **Paul F. Schwartz,** superintendent of TrucTrain (piggyback) operations, Philadelphia, appointed superintendent, Harrisburg division, succeeding **Hugh J. Martin,** who replaces Mr. Wieters at Pittsburgh. **L. Grant Robins,** assistant superintendent of freight transportation, Eastern region, Philadelphia, appointed superintendent, New York division, succeeding **Walter L. Butz,** promoted to assistant general manager, Northern Region, Detroit.

SPENO

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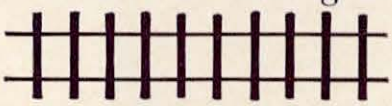

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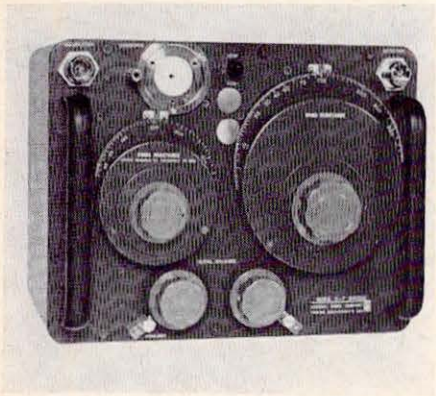
Railroad .....

Position .....

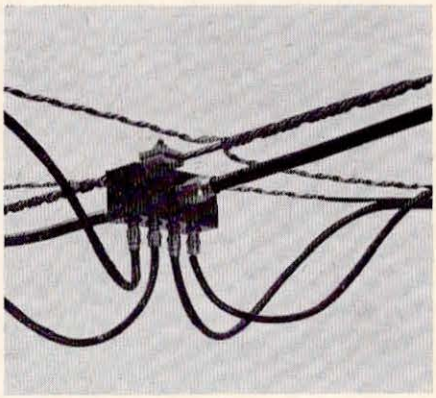
(RA 4/22)

NEW PRODUCTS REPORT



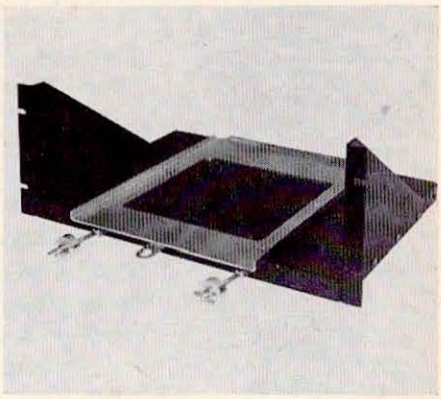
Radio-frequency bridge (RA-1)

A new impedance bridge has been developed for accurate measurements in the 400 KHz to 60 MHz range. The screw-type terminals on the basic instrument can be adapted to coaxial systems with appropriate adaptors. The resistance range of the bridge is 0 to 1000 ohms, and the reactance range is ±5000 ohms at 1 MHz. (At other frequencies the reactance reading must be divided by the frequency in MHz.) *General Radio Co.*



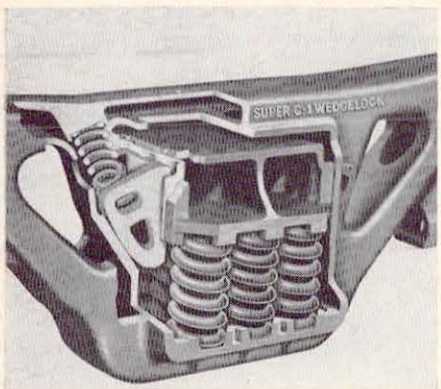
Reducing connector (RA-2)

A new connector is an L-shaped helically formed length of double-strand wire which grips the messenger strands. The larger helical leg wraps around the feeder messenger near the tap unit. The smaller leg winds around the stripped messenger strand supporting the cable drop, eliminating the need for "C" span clamps and dead ends. The connectors will accommodate feeder messenger strand diameters of 1/4 and 5/16 in. *Preformed Line Products Company.*



Mounting rack (RA-3)

The new type 11MT mounting rack provides a relay rack type mounting for standard AAR communication units. It requires 7 in. of rack space but a 9-in. space is required if a WABCO 2R series unit is installed. The rack is constructed of heavy-gauge cold rolled steel. The rack has adjustable end brackets and is available both with and without the AAR mounting plate and hold down clamps. *Signal & Communications division of WABCO.*



Freight-car truck (RA-4)

A freight-car truck, the Super C-1 with Wedgelock, is designed for high-capacity roller-bearing cars in high mileage service. It features increased lateral displacement, improved ride through better car control, control of vertical oscillation through increased snubbing capabilities and lower rates of wear by assuring squareness. The basic design of the compression and tension members and pedestal jaw of the side frame are unchanged. The major modification is in the vertical columns for friction wedge application. Similarly, the bolster is conventional except for modifications where the wear plates are applied. Wider bearing areas protect against an out-of-square condition, prevent bolster rotation. Longitudinal contact areas are increased. Diagonal thrust of the wedge and spring combination controls damping with pressure selective, depending on service. A standard spring is used for ordinary conditions; an alloy spring increases pressure for more severe service; a double-coil spring maximizes pressure and meets recent AAR ruling for certain cars. *National Castings.*

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PLEASE SEND INFORMATION ABOUT PRODUCTS DESCRIBED ON PAGE 31 MARKED: RA-1 RA-2 RA-3 RA-4

NAME ..... TITLE.....

COMPANY .....

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● Inquiries can be processed only if title and company are shown. 4/22/68

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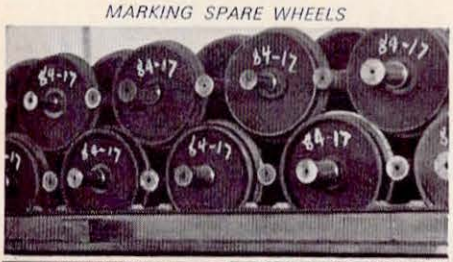

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WALTER TAFT

WATCHING WASHINGTON

WIN FOR TRAFFIC OFFICERS—The AAR Board of Directors has decided to give traffic officers jurisdiction over demurrage and storage charges, and mileage allowances for private cars. Joint action on such matters, along with per diem rates for rental of freight cars among railroads, is covered by Section 5a Agreement No. 7. That agreement is now administered by the General Committee of AAR's Operating-Transportation Division. Like all pacts entered pursuant to Section 5a, which the Reed-Bulwinkle Act added to the Interstate Commerce Act in 1948, No. 7 accords antitrust immunity for joint actions.

THE APPROVED PROPOSAL—The transfer approved by the AAR Board would put demurrage and storage charges, and car-mileage allowances, under the jurisdiction of a new national committee of chief traffic officers, which would be set up in the Operating-Transportation Division. Per diem matters would remain with the General Committee.

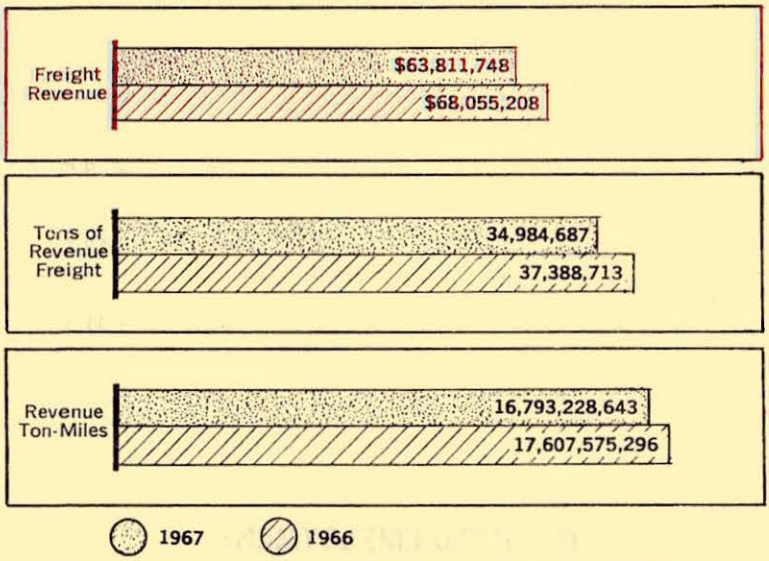
REVERSAL—The action of the AAR directors marks a reversal of their 1964 decision to reject the proposed transfer. At that time, however, the Board did formalize arrangements for giving traffic officers a consulting role. It authorized establishment of an advisory traffic committee, with regional representation, and required the General Committee to consult with these advisers. The General Committee, however, was left with the last word.

SHIPPER OPPOSITION—In advocating the transfer, traffic officers argued generally that the charges involved are part of competitive pricing for transportation service—so, like freight rates, they should be under the control of traffic officers. There is much shipper opposition, including that of the National Industrial Traffic League. Discussions in League circles reflect fears that traffic officers might be inclined to treat the charges as revenue producers. The League's historic position is that such charges (especially demurrage) should be imposed only to expedite release of cars and discourage their use for storage.

ICC CLEARANCE REQUIRED—The opposition still has recourse to the ICC. Amendments to existing Section 5a agreements must be submitted to the Commission for clearance. So, implementation of the AAR transfer plan will require a Commission-approved amendment to Agreement No. 7.

CLASS A and B WATER CARRIERS

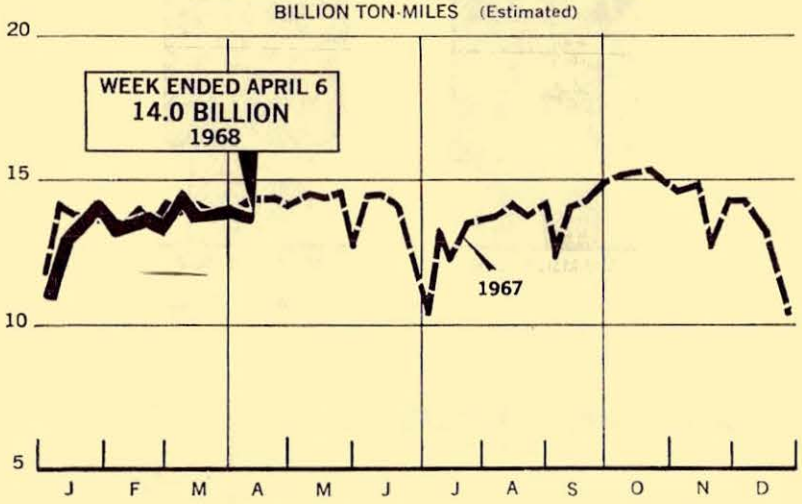
FOURTH-QUARTER REVENUE AND TRAFFIC—1967 vs. 1966



Source: Bureau of Accounts, ICC. Class A and B water carriers are those having, respectively, operating revenues exceeding $500,000 and between $100,000 but less than $500,000.

RAIL FREIGHT TRAFFIC TRENDS

BILLION TON-MILES (Estimated)



Source: Association of American Railroads

Current statistics

Carloadings, revenue freight	
15 wks., 1968	7,695,749
15 wks., 1967	7,861,116
New freight cars on order	
Mar. 1, 1968	24,742
Mar. 1, 1967	46,156
New freight cars delivered	
2 mos., 1968	10,467
2 mos., 1967	15,318
Serviceable cars	
Mar. 1, 1968	1,400,628
Mar. 1, 1967	1,420,684

SHIPMENTS OF RAILROAD STEEL PRODUCTS*

First two months 1968-1967

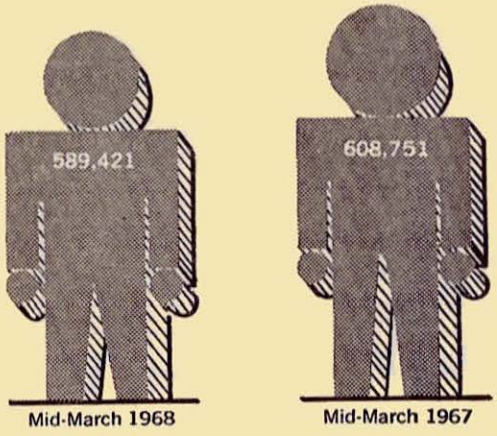
NET TONS

	1968	1967	Per Cent Change
Railroad rails, trackwork and equipment	187,513	180,903	+ 3.5
Freight cars, passenger cars and locomotives	384,164	449,310	—13.1
Street railways and rapid transit systems	7,327	4,312	+41.1

*Preliminary. All grades including carbon, alloy and stainless.

RAILROAD EMPLOYMENT

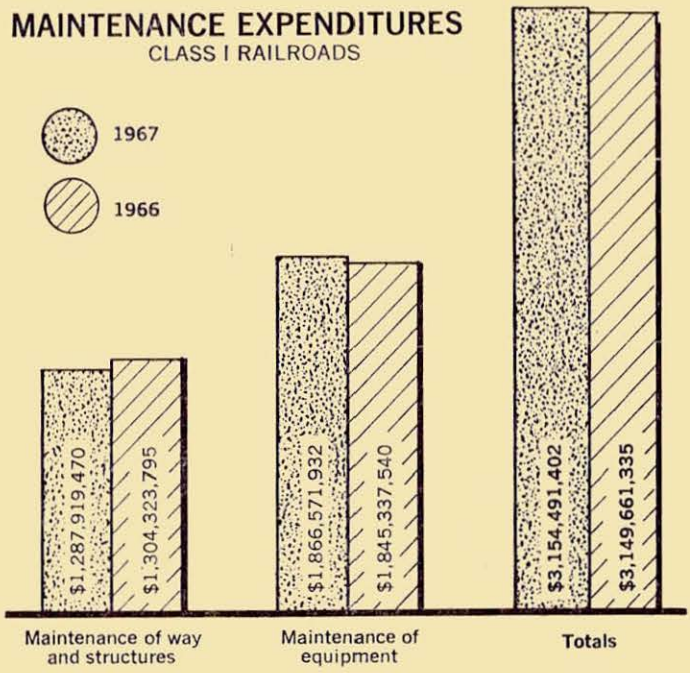
(CLASS I LINE-HAUL RAILROADS)



Source: Bureau of Accounts, ICC.

MAINTENANCE EXPENDITURES

CLASS I RAILROADS



Source: Economics and Finance Dept., AAR.

MARKET OUTLOOK

CARLOADINGS

Loadings of revenue freight in the week ended April 13 totaled 534,918 cars, the Association of American Railroads announced on April 18. This was an increase of 6,520 cars, or 1.2%, compared with the previous week; a decrease of 19,078 cars, or 3.4%, compared with the corresponding week last year; and a decrease of 8,131 cars, or 1.5%, compared with the equivalent 1966 week. Ton-miles generated by carloadings in the week ended April 13 are estimated at 14.1 billion, a decrease of 1.2% below the corresponding week of 1967, and 3.1% above the 1966 week.

PIGGYBACK CARLOADINGS

U. S. piggyback loadings for the week ended April 6 totaled 25,912 cars, carrying 41,972 trailers, compared with 24,003 cars, carrying 39,457 trailers, in the corresponding 1967 week. Loadings for 1968 up to April 6 totaled 341,411 cars, carrying 557,887 trailers, compared with 314,565 cars, carrying 516,152 trailers, in the corresponding period of 1967.

REVENUE FREIGHT CARLOADINGS

For the week ended Saturday, Apr. 13 District	1968	1967	1966
Eastern, including Allegheny and Pocahontas ..	215,014	219,588	195,249
Southern	115,592	122,243	115,269
Total Eastern and Southern Districts	330,606	341,831	310,518
Northwestern .	63,681	65,595	77,795
Central Western	102,287	107,177	113,973
Southwestern .	38,344	39,393	40,763
Total Western Districts	204,312	212,165	232,531
Total All Roads	534,918	553,996	543,049
Commodities:			
Grain and Grain Products	34,267	43,658	52,015
Livestock	889	1,408	1,675
Coal	110,292	114,688	70,334
Coke	8,344	7,239	8,898
Forest Products	38,455	39,404	40,309
Ore	30,419	26,954	36,033
Merchandise l.c.l.	4,128	5,239	6,954
Miscellaneous .	308,124	315,406	326,831
Apr. 13	534,918	553,996	543,049
Apr. 6	528,398	543,761	568,683
Mar. 30	554,192	537,909	544,787
Mar. 23	528,224	529,605	571,095
Mar. 16	526,359	536,962	572,671
Cumulative total, 15 weeks	7,695,749	7,861,116	8,101,124
Estimated revenue ton-miles (billions) 15 weeks	205.6	205.7	206.0

IN CANADA

Carloadings for the seven-day period ended March 21 totaled 69,871 cars, compared with 69,030 for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd. from Connections
Totals for Canada		
March 21, 1968 ...	69,871	27,089
March 21, 1967 ...	69,063	25,632
Cumulative Totals		
March 21, 1968 ...	770,956	274,017
March 21, 1967 ...	792,861	283,779

FREIGHT-TRAIN CARS

• *Norfolk & Western.*—Will purchase 283 86-ft high-cube box cars, 100 tri-level auto-rack cars, and miscellaneous containers and tie-down devices for handling vehicles and automotive parts, at a total cost of more than $10.6 million. All equipment is scheduled for delivery within six months. N&W presently operates 875 high-cube cars and 2,000 multi-level rack cars. Last year N&W carried 854,000 new vehicles, more than 10% of the total manufactured. In January and February of this year, N&W trains carried 187,000 new vehicles, an increase of 50,000 over the corresponding 1967 period.

SPECIAL

• *Penn Central.*—Ordered 125 new tri-level racks, for transporting automobiles, at a cost of $837,000. Up to 15 autos will be carried on the new racks. They will be mounted on 89-ft piggyback-type flat cars leased by PC from the Trailer Train Co. Deliveries are scheduled to be completed by the end of May. The order increases PC's fleet of cars carrying 1968 automobiles from assembly plants to distribution centers to 1,724.

LOCOMOTIVES

• *Long Island.*—Will acquire eight Century 420, 2,000-hp diesel-electric passenger locomotive units from Alco at a cost of approximately $2 million. The new units will have special speedometers and cab signals to conform to the operating procedure of the 270 high-speed electric commuter cars now on order with the Budd Co. for the Metropolitan Transportation Authority, which owns the LIRR.

• *990 new units installed in 1967.*—Class I roads installed 990 new and 77 rebuilt diesel electric units in 1967, according to the AAR yearly summary. In 1966 they installed 1,362 new and 32 rebuilt units. Locomotive units on order Jan. 1, 1968, totaled 513 diesel electric units, including 41 to be rebuilt in contract shops and 30 in railroad shops. On Jan. 1, 1967, Class I roads had 388 units on order, all of which were diesel-electric.

MAINTENANCE EXPENDITURES

• *Fourth quarter of 1967 down 3.0%.*—Expenditures by Class I roads for maintenance of equipment, way and structures in the fourth quarter of 1967 were down $23.8 million, compared with the fourth quarter of 1966, according to report of AAR Economics and Finance Dept. summarized below:

	Fourth Quarter		
	1967	1966	% Change
Maint. of way and structures	$318,656,526	$334,367,212	−4.7
Maintenance of equipment ..	461,597,644	469,704,943	−1.7
Totals	780,254,170	804,072,155	−3.0

YOU OUGHT TO KNOW

DOT helps clear the path for high-speed trains Twenty grade-crossings now lie in the path of the high-speed trains that will be streaking between New York and Washington late this year. Sixteen of these are in Maryland. Last week, the Department of Transportation and the State of Maryland reached agreement on a $330,000 program to reduce the crossing hazards. Work to be performed will involve installation of new train-activated advance warning devices; revision of track circuits, where practicable, to reflect higher train speeds; installation of special advanced highway warning signs, as well as painted pavement markings; removal of natural or man-made sight obstructions on approach roads; and changes in highway approaches, including widening and grade improvements. The State of Maryland Roads Commission will foot $150,000 of the bill; the Federal Highway Administration, $120,000; the Federal Railroad Administration, $60,000.

Sam Hudson moving to Detroit firm One of the railroad supply industry's best-known public relations and advertising figures—Sam Hudson—has been named executive vice president and general manager of Frank Hedge, Inc., a Detroit public relations firm. Hudson, who has been director of advertising and public relations at Evans Products Company's Transportation Group in Plymouth, Mich., since 1952, will continue to direct these activities for Evans as an account of Frank Hedge, Inc. Hudson's previous positions in public relations, advertising and sales promotions were with Saks Fifth Avenue, Allied Chemical, and Western Electric, all in New York City.

Kenefick leaving Penn Central to rejoin UP John C. Kenefick vice president-transportation of the recently merged Penn Central, will become vice president-operations of the Union Pacific on May 1. D. F. Wengert, a 44-year UP veteran who has served as that railroad's vice president-operations since 1964, will assume the new title of assistant chief executive officer-transportation. Kenefick, who is 47, started his railroad career on the UP, working in the engineering and operating departments from 1947 to 1952. He joined the New York Central in 1955.

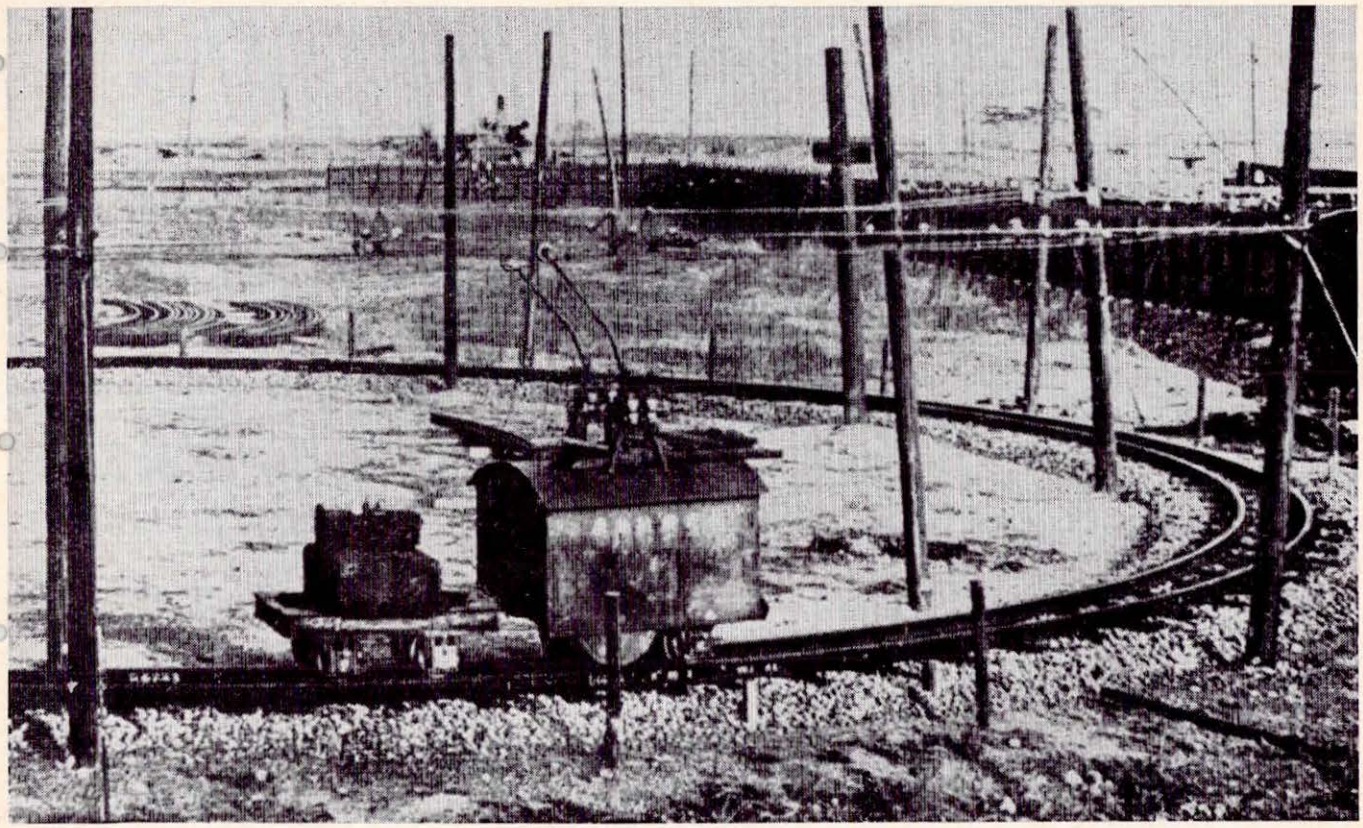
Reading trims deficit in first quarter Charles E. Bertrand, president of the Reading, last week reported a first-quarter 1968 net-income deficit of $381,000 — a substantial improvement over first-quarter 1967, when the railroad operated at a net loss of $1,452,000. As factors in trimming the deficit, Bertrand cited increased freight revenues, higher passenger fares, and passenger service support payments. He said higher wage and material costs were partially offset by improved operating efficiencies, particularly in car utilization.

Record journal performance set during 1967 Despite a fourth quarter in which journal performance was consistently poorer than that of the corresponding months a year earlier, 1967 marked a new high in miles per hotbox setoff for North American railroads. The new record of 1,828,329 miles per setoff for the entire year was up from 1,693,574 in 1966 and 1,377,908 miles in 1965.

New magazine created by Penn Central The "Penn Central Post," which describes itself as a tabloid magazine, is one of the new looks resulting from the merger of the Pennsylvania and New York Central. The new publication, which will go out to the line's nearly 100,000 employees twice each month, was born Mar. 1. The initial issue is an eight pager liberally sprinkled with photos of the Feb. 1 merger. The new publication replaces the PRR's "Pennsy" and the New York Central's "Headlight." Joseph Shallit is editor.

Sumitomo is the first foreign rolling stock parts maker to get AAR approval.

Is a history of original research the reason?



This photograph is 40 years old.
We took it at our Osaka Works in 1928 during a ten-year study of the abrasion of rails and rolling stock, in collaboration with the Japanese Government Railways. And presented the results of the research at the 2nd International Rail Assembly in Zurich in 1932.
The unusual thing is that today these results are still regarded as definitive. Nobody else has ever had to do this kind of research.
Maybe nobody else ever will.

Original rolling stock research characterizes our long history of manufacture. Our current work, for instance, will show us how to build wheels and axles for a new Japanese National Railways super-express expected to operate at speeds up to 160 mph. For this train, wheel tests are being conducted at speeds up to 200 mph.
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There's a multitude of ways you can benefit from our research, because we make more rolling stock parts than any other steelmaker.
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And the quality of these products is unquestioned. That's another reason why we're the first foreign rolling stock parts maker to get Association of American Railroads approval, for wheels, axles and wheel sets.
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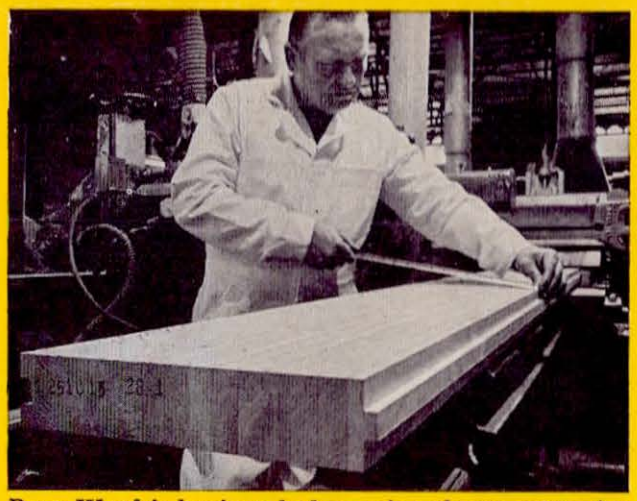
Circle 10 on coupon page 31

DEPEND ON BRUCE



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FREIGHT CAR FLOORING

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MEMBER RPI

Richard A. Heise
Rail-Trailer Co.

J. J. Hickey
Enterprise

SUPPLY TRADE

Richard A. Heise has been named executive vice president, **Rail-Trailer Co.** Mr. Heise, formerly financial vice president and general counsel, will continue to serve as general counsel.

J. J. Hickey has been appointed vice president and general sales manager, **Enterprise Railway Equipment Co.**, Chicago. Mr. Hickey has had 22 years experience in the railway supply industry.

Robert A. LeFevre, general advertising manager, **Ohio Brass Co.**, Mansfield, Ohio, has been named general marketing manager, O-B Division. **Robert H. Schwinn,** assistant manager, promoted to manager, marketing services.

Cardwell Westinghouse Co., Chicago, has been appointed exclusive sales and service representative for "Sonicar" by **American Bosch Arma Corp.**, Garden City, N.Y., its developer. "Sonicar" is an electromechanical system for controlling the coupling speed of freight cars during switching operations.

W. J. Rooney has been promoted to general sales manager, Mechanical Products Division, **Garlock Inc.**, Palmyra, N.Y.

T. B. Thompson, executive vice president and general manager of **Femco, Inc.**, Irwin, Pa., a subsidiary of Gulton Industries, has been appointed president. Mr. Thompson was vice president and chief signal officer, Union Switch & Signal Division of Westinghouse Air Brake Co. prior to joining Femco four years ago.

Robert W. Buchanan has been named sales manager, **Mid-Control Co.**, Des Plaines, Ill. He was previously with Railroad Repair & Supply Co. for nine years, prior to which he spent five years in the purchasing department of the **Milwaukee.**

Masury-Columbia Co., Melrose Park, Ill., a subsidiary of Alberto-Culver Co., is expanding its entire product line to include industrial cleaners and degreasers for the transportation industry. **Donald A. McLellan,** national manager of sales to chain stores, promoted to the new position of executive director of marketing. **Robert T. Dunn,** regional sales manager, Atlanta, Ga., named national field sales manager, also a new post. **Dan Griffin,** district sales manager, Nashville, Tenn., has been appointed regional sales manager, Atlanta.

L. E. Hoyer has been appointed assistant chief engineer for wheel products, Railroad Products Group, **Abex Corp.**, New York.

◄ Circle 11 on coupon page 31

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LOCOMOTIVES FOR SALE OR LEASE

1—44-T G.E. Switcher
1—70-T G. E. Switcher
1—45-T G.E. Switcher
2—100-T 660 HP Alco Switchers
2—100-T 660 HP Baldwin Switchers
15—125-T 1600 HP Baldwin Road Switchers, late model
6—125-T 1600 HP Fairbanks-Morse Rd Switchers, late model

LOCOMOTIVE CRANES FOR SALE

1—40-T Ind Brownhoist, 60 ft boom, excel. cond.
1—25-T Link-Belt, 50 ft boom

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Peter Hoagland
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—district managers

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VIEWPOINT

"No market, no service"

We've been saying it for a long time—most recently, in our April 1/8 special report on passenger-train service. We're glad now to hear it from Federal Railroad Administrator A. Scheffer Lang: "No market—no service."

Mr. Lang addressed himself to the passenger-service problem in an interview last week with United Press International. The public does not, he contends, understand what railroads are up against. Subsidies to airlines go unchallenged—but railroads "still are being treated as big, bad industrialists, and they are not."

Railroads, the FRA chief went on to say, feel they have to put their money where their business is—in freight. This means that in the future passenger-train service is going to be provided on a "selective" basis:

"We will have rail service where there is a market—no market, no service."

It follows, said Mr. Lang, that railroads will not be able to run trains for "a few persons who want to go from Chicago to Keokuk, Iowa, even though there is no adequate bus or airline service."

Nowhere did Mr. Lang suggest that he likes all of this; he merely thinks that's the way it has to be. We hope his common sense views will be reflected in the future stance of the Department of Transportation whenever "the problem" rears its head in official quarters.

How to monopolize a right of way

John A. Creedy, the scholarly and personable president of the Water Transport Association, feels that there is too much acrimony and too little harmony among competing transportation modes, and his public speeches reflect this feeling. Mr. Creedy is a persuasive pleader for the interests of his carrier members; he is just about as reasonable and objective as any trade association head can afford to be, and we admire his restraint.

But in a speech prepared for delivery before the Illinois Association of ICC Practitioners last week, Mr. Creedy made a statement which should not go unchallenged.

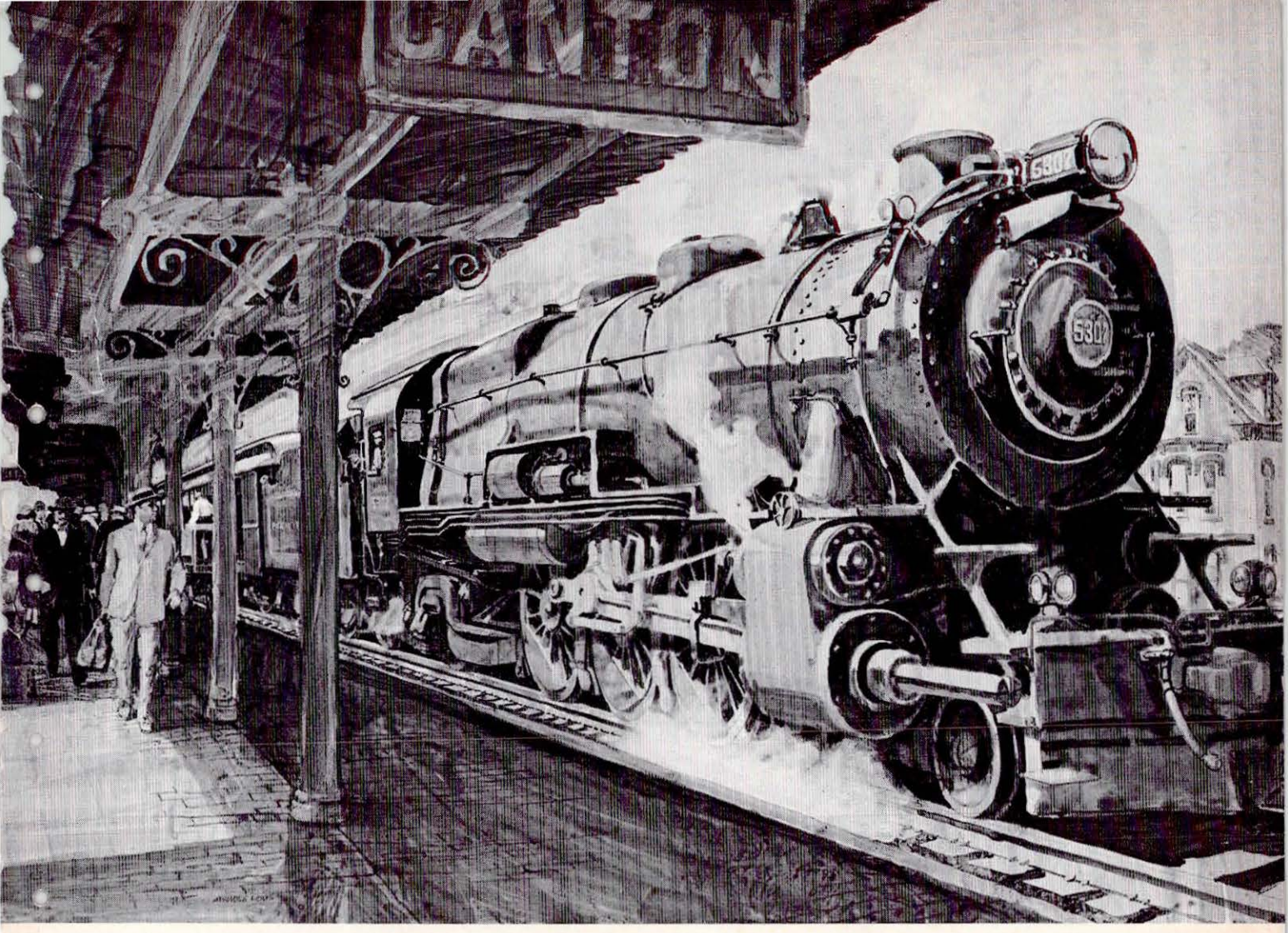
Commenting on the railroads' continuing efforts to gain exemption from minimum rate regulation on bulk commodities, Mr. Creedy suggested that "the complaint of inequality of competitive opportunity" does not bear close scrutiny. Then he rephrased the Orwellian dictum on equality: "While the water carriers are more equal in some respects, the railroads are far more equal in many other respects."

As one example of this, he cited the following:

"Railroads are more equal in the monopoly they enjoy of their right of way. On the river there is complete freedom of entry on bulk traffic and therefore far more intense competition."

The answer to that, of course, is that anybody can have a monopoly of right of way—if they pay for it. The railroads do. The water carriers don't. The highway carriers don't. The air carriers don't.

If Mr. Creedy still wonders why many railroad men see red when they see a barge tow, we suggest that he need only examine his own statement to find out why this is so.



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Now there's a new era in railroading. And Humble is providing the industry with modern petroleum products for everything from high-powered diesel-electric locomotives to unitrains to piggyback cars and roller-bearing freight.

But Humble will never forget the Golden Era of steam because most of our people started then. In the shops.

Most important, we'll never forget how to give you the kind of service that only a railroad man knows how to give.

Your Humble railroad man is a good man to know, whether you want to talk about trains of yesterday, today or tomorrow.

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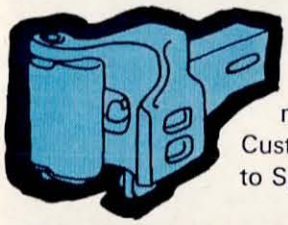

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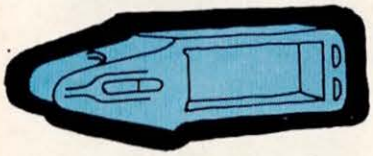

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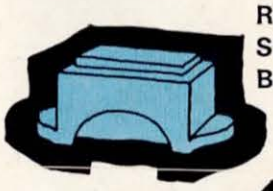

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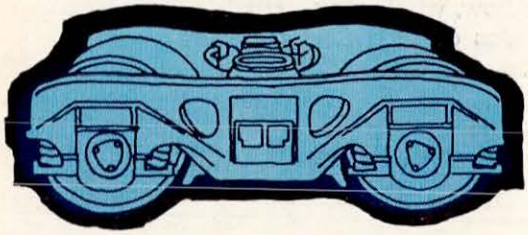

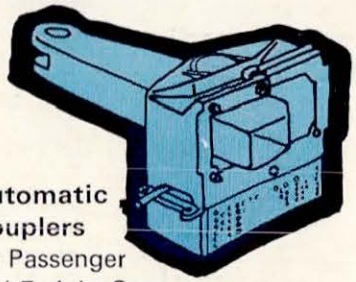

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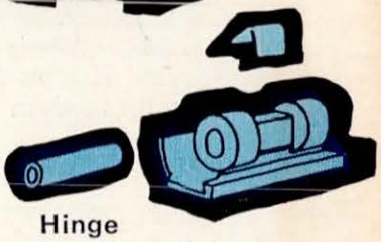

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